EARTHJUSTICE

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October 16, 2023

VIA ELECTRONIC FILING

Andrew S. Johnston
Executive Secretary
Maryland Public Service Commission
6 Saint Paul Street, 16th Floor
Baltimore Maryland 21202-6806

Re: The 2024–2026 EmPOWER Maryland Program Plans, Case No. 9705

Dear Mr. Johnston:

Attached for filing in the above-referenced case, please find the Maryland Energy Efficiency Advocates' ("MEEA") Comments on the EmPOWER Maryland 2024-2026 Program Plans.

In accordance with the Commission's March 16, 2020, Notice of Waiver and Relaxed Filing Requirements, MEEA will not provide paper copies of this filing. Please contact me if you have any questions. Thank you for your attention to this matter.

Sincerely,

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BEFORE THE PUBLIC SERVICE COMMISSION OF MARYLAND

THE 2024–2026 EMPOWER MARYLAND PROGRAM PLANS	CASE NO. 9705

MARYLAND ENERGY EFFICIENCY ADVOCATES' COMMENTS ON EMPOWER MARYLAND 2024-2026 PROGRAM PLANS

I. BACKGROUND

On August 18, 2023 the Maryland Public Service Commission ("PSC" or "Commission") issued a Notice of Comment Period and Hearings to consider the 2024-2026 EmPOWER Maryland plans of The Potomac Edison Company, Baltimore Gas and Electric Company, Delmarva Power & Light Company, Potomac Electric Power Company, Southern Maryland Electric Cooperative, Inc., Washington Gas Light Company, and the Maryland Department of Housing and Community Development. Consistent with its Order No. 90546, in which the Commission encouraged stakeholders to "file comments on each of the utilities' filed scenarios, indicating what plans and goals they are advocating for and providing specific details in support thereof,"[1] the Notice directed that "[w]ritten comments on the EMPOWER Maryland Plans, semi-annual reports, and other reports shall be filed by October 16, 2023."[2] Accordingly, the Maryland Energy Efficiency Advocates ("MEEA")[3] respectfully offer these comments and recommendations regarding the Utilities' and DHCD's 2024-2026 EmPOWER program plans.

[1] Order No. 90546, Order on Goal-Setting for Future EmPOWER Maryland Program Cycles, at 17 (Mar. 20, 2023), ML# 301876 ("Order No. 90546").
[2] Notice of Comment Period and Hearings, at 2 (Aug. 18, 2023), ML# 304643.
[3] MEEA includes Green & Healthy Homes Initiative, National Consumer Law Center, National Housing Trust, Natural Resources Defense Council, Maryland Legislative Coalition, Howard County Climate Action, Elders Climate Action Maryland, Climate Reality Greater Maryland, Maryland Legislative Coalition-Climate Justice Wing, Sierra Club of Maryland.

In its EmPOWER Maryland Energy Efficiency Act Report of 2023 to the General Assembly, the Public Service Commission reported that "[p]rogram-to-date, the utilities' EmPOWER Maryland programs have saved a total of 14,998,227 MWh and 3,051 MW. The expected savings associated with EmPOWER Maryland programs is over $13.6 billion over the life of the installed measures for the EE&C programs."[4] Clearly the impact of EmPOWER in reducing energy waste since it was initially enacted in 2008 has been significant, reducing demands on the State's electric grid, reducing emissions, and reducing electricity bills for thousands of Maryland households and businesses. As originally conceived, EmPOWER was primarily focused on ensuring the reliability of the State's electric delivery system in light of the looming potential for power interruptions caused by an imbalance between available electric capacity and the expected needs of utility customers. Energy efficiency and demand response were, and remain, critical, cost-effective tools for ensuring that safe, reliable electricity continues to be available to meet the State's needs at the lowest delivered cost. The least-cost delivery of safe, reliable energy remains the primary mandate of the EmPOWER utilities, but the urgent need to mitigate climate change is now integral to consideration of which energy sources should be relied on and to what degree, and the need to use all energy as efficiently as possible is even greater now than it was in 2008. Evolving the EmPOWER program to achieve "a portfolio of mutually reinforcing goals, including greenhouse gas emissions reduction, energy savings, net customer benefits, and reaching underserved customers"[5] will require effective planning and

[4] Pub. Serv. Comm'n of Maryland, *The EmPOWER Maryland Energy Efficiency Act Report of 2023*, at 2 (June 2023), https://www.psc.state.md.us/wp-content/uploads/2023-EmPOWER-Maryland-Energy-Efficiency-Act-Standard-Report.pdf.

[5] Climate Solutions Now Act of 2022 ("CSNA"), at 72, lines 1–3, S.B. 528, Reg. Sess. (Md. 2022), https://mgaleg.maryland.gov/2022RS/bills/sb/sb0528E.pdf This bill became law pursuant

coordination among the utilities and DHCD to ensure that all of the State's households and businesses have equal access to the clean energy transition.

The Commission provided specific directions to the utilities and DHCD regarding the 2024-2026 Plans in Order No. 90546, issued on March 20, 2023. In this Order, the Commission indicated that the "utilities are to file three separate plans, all of which shall, at a minimum, achieve the energy reductions required by PUA § 7-211(g)(2)."[6] The first of the three scenarios is described as the "2023 scenario" which is "intended to estimate GHG reduction from current EmPOWER programs and spending levels" with the condition that "[i]f the 2023 Scenario cannot meet current statutory requirements based on the GHG Abatement Study's BAU scenario, then the 2023 Scenario shall include costs and programs such that the statutory requirements would be met at the lowest possible cost." [7] The second is the "maximum scenario" which is "intended to include programs and measures that would bring maximum savings when spending is unconstrained." [8] The third is the "middle scenario" which is expected to "fall in between the 2023 and Maximum Scenarios and is intended to estimate GHG reduction levels associated with programs and measures that are amplified beyond the 2023 Scenario, while still being cognizant of funding constraints." [9]

The Commission further provided that "[e]ach scenario must contain thorough cost-benefit and bill impact analyses performed by its respective utility" and "must be designed to be cost-effective at the portfolio level, while meeting existing statutory energy efficiency goals, in

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to Article II, Section 17(b) of the Maryland Constitution and is codified as Maryland Chapter of Laws, Chapter 38. The law became effective in June, 2022.

[6] Order No. 90546 at 14, ML# 301876.

[7] *Id.* at 15.

[8] *Id.*

[9] *Id.*

support of state policies and objectives, and without placing undue burdens on ratepayers." [10] Additionally the Commission required the utilities "to develop their plans with a minimum of 80 percent of the goal savings derived from BTM measures and FTM community resources" [11] but also allowed that they "may request a greater percentage of FTM measures, subject to Commission review and approval prior to implementation." [12] The Commission noted that "no evidence has been presented regarding FTM utility resources" [13] and that it would thus be "premature for the Commission to designate BTM and FTM percentage limitations." [14]

Rather than establish a specific goal for limited-income program savings for DHCD, the Commission requested that DHCD "develop its plan for the 2024-2026 program cycle to meet the savings targets designated in SB144/HB169" [15] Since the issuance of Order 90546, SB144/HB169 was enacted in statute and signed by Governor Moore.

II. OVERVIEW OF MEEA'S OBSERVATIONS ON THE PLANS

MEEA reviewed each of the utilities' and DHCD's Plans, propounded discovery and reviewed responses, and conducted comparative analysis of the different utilities' estimated costs and savings proposals. MEEA acknowledges that the utilities were required to produce plans for three distinct scenarios in an abbreviated time frame and recognizes how challenging this was.

Unfortunately, as it will discuss in these comments, MEEA observes that the utility plans do not succeed in proposing "a portfolio of mutually reinforcing goals including greenhouse gas emissions reduction, energy savings, net customer benefits, and reaching underserved

[10] *Id.* at 16.
[11] *Id.* at 17.
[12] *Id.*
[13] *Id.* at 16.
[14] *Id.* at 16 – 17.
[15] *Id.* at 23.

customers" as required by statute. The electric utility plans remain overly reliant on short-lived savings from behavior programs and on the continuation of savings from Conservation Voltage Reduction ("CVR"), while WGL's portfolio remains highly reliant on incentives for gas combustion equipment. The utilities' proposed residential new construction programs all continue to allow homes that rely on fossil fuel combustion to participate, and the large range of proposed costs and benefits from building electrification programs that are not clearly explained. Moreover, the lifecycle cost of saved energy varies widely across the utility portfolios with no apparent explanation, and the per-household costs for EmPOWER vary dramatically in different utility territories, which places inequitable burdens on limited-income households solely dependent on which utility provides their electricity.

In MEEA's view, EmPOWER is poised to deliver on the requirements of Climate Solutions Now, but if it is to do this the utility plans will need to be significantly revised. Expanding comprehensive, long-lived energy efficiency ("EE") savings, and integrating EE and Demand-Response ("DR") program designs to incorporate deliberately-reduced reliance on fossil fuels through the prioritization of building electrification over continued promotion of natural gas equipment are needed if EmPOWER is to be aligned with the State's climate objectives. Changing the way costs are allocated to limited-income households must be accomplished if EmPOWER is to treat customers equitably, and the extreme differences in EmPOWER program costs must be better understood so the Commission can provide direction to utilities that will maximize customer benefits. For all these reasons, as will be explained below, MEEA recommends the Commission approve only the first year of the electric utilities' 2023 scenario plans and require the utilities to take actions discussed below to ensure the Plans comply with statutory intent and requirements.

III. SUMMARY OF PRINCIPAL RECOMMENDATIONS

Based on its review of the utilities' and DHCD's Plans, MEEA respectfully recommends the Commission take the actions described below. The reasoning behind each of the recommendations will be discussed in the following pages. Where MEEA expresses concern about a specific proposal it should not be construed as opposition to the general concept unless it is stated as such. For example, MEEA emphatically supports implementation of electrification programs under the EmPOWER banner despite its concerns about the specific proposals provided by the utilities in their Plans. MEEA also respectfully urges the Commission not to assume that MEEA either supports or rejects any aspect of a utility's or DHCD's proposed plan that it does not specifically address in these comments. MEEA respectfully recommends the Commission take the following steps in response to the 2024-2026 Plans filed by the utilities and DHCD.

A. Regarding BGE, Delmarva, Pepco, PE, and SMECO

1. Approve implementation of each electric utility's 2023 Scenario programs for 2024 only, so that the following recommended actions can be carried out and revised Plans developed and filed for approval;
2. Direct the independent evaluator to conduct program-level cost benchmarking of the EmPOWER utilities and leading utilities nationally to determine:
    a. Why there is so much variation among the EmPOWER utilities with respect to program estimated lifecycle costs, and how costs could be "normalized" across utilities to ensure that customers receive the best value for their program investments;
    b. What lifecycle costs are reasonable based on best practice programs and other analysis;

3. Require the electric EmPOWER utilities to file revised 2024-2026 Plans no later than August 1, 2024 that reflect the following improvements:
    a. Elimination of redundant program administrative structures and the pursuit of joint program implementation wherever practicable, either through joint, standardized contracts with one or more program vendors or through an overarching third party administrator;
    b. Consistent program models and lifecycle costs are employed across all utilities and lifecycle costs do not exceed best practice costs determined by an independent evaluation;
    c. Include building electrification programs that provide equivalent benefits and opportunities at consistent costs across all five electric EmPOWER service territories;
    d. CVR savings are not eligible to count towards the EmPOWER savings goal. Utilities are able to include other FTM proposals that would engender new incremental savings up to 20% of the EmPOWER goal requirement;
    e. Behavior program savings make up no more than 10% of total portfolio savings;
    f. No programs that are specifically targeted to DHCD-eligible customers are included;
    g. Beginning January 1, 2025, residential new construction program(s) are only available for homes that do not use fossil fuels or connect to the gas distribution system for any end use;

B. Regarding WGL

4. Approve implementation of the Company's 2023 Scenario for 2024 only, but exclude the provision of incentives for any natural gas combustion equipment beginning July 1, 2024;
5. Require the WGL to file a revised 2024-2026 Plan no later than August 1, 2024 that reflects

the following improvements:

a. Removal of all incentives for new gas combustion equipment effective July 1, 2024;

b. Beginning January 1, 2025, residential new construction program is only available for homes that do not use fossil fuels or connect to the gas distribution system for any end use;

C. Regarding DHCD

6. Approve DHCD's 2024-2026 LI Plan

D. Regarding Performance Incentive Mechanisms

7. Reject without prejudice the utilities' performance incentive mechanism proposals and establish a technical conference process to establish an appropriate, reasonable, and consistent PIM across the investor-owned utilities.

MEEA further recommends the Commission take the following actions to advance progress towards equitable achievement of the State's climate goals:

8. Establish provisions for the creation of uniform, state-wide electrification programs that would be either fully delivered by a third-party entity other than the utilities, or, at a minimum, would ensure that utility-delivery of such programs is uniform and consistent throughout the state so that all customers will have access to equivalent electrification opportunities regardless of which utility provides their electricity;

9. Establish a percent of income payment plan ("PIPP") mechanism for income-qualified households to limit total energy burdens to no more than six percent of income. Or, at a minimum, establish a capped EmPOWER surcharge of no more than $50 per eligible household per year for income-qualified households to mitigate the regressive impacts of increasing utility rates.

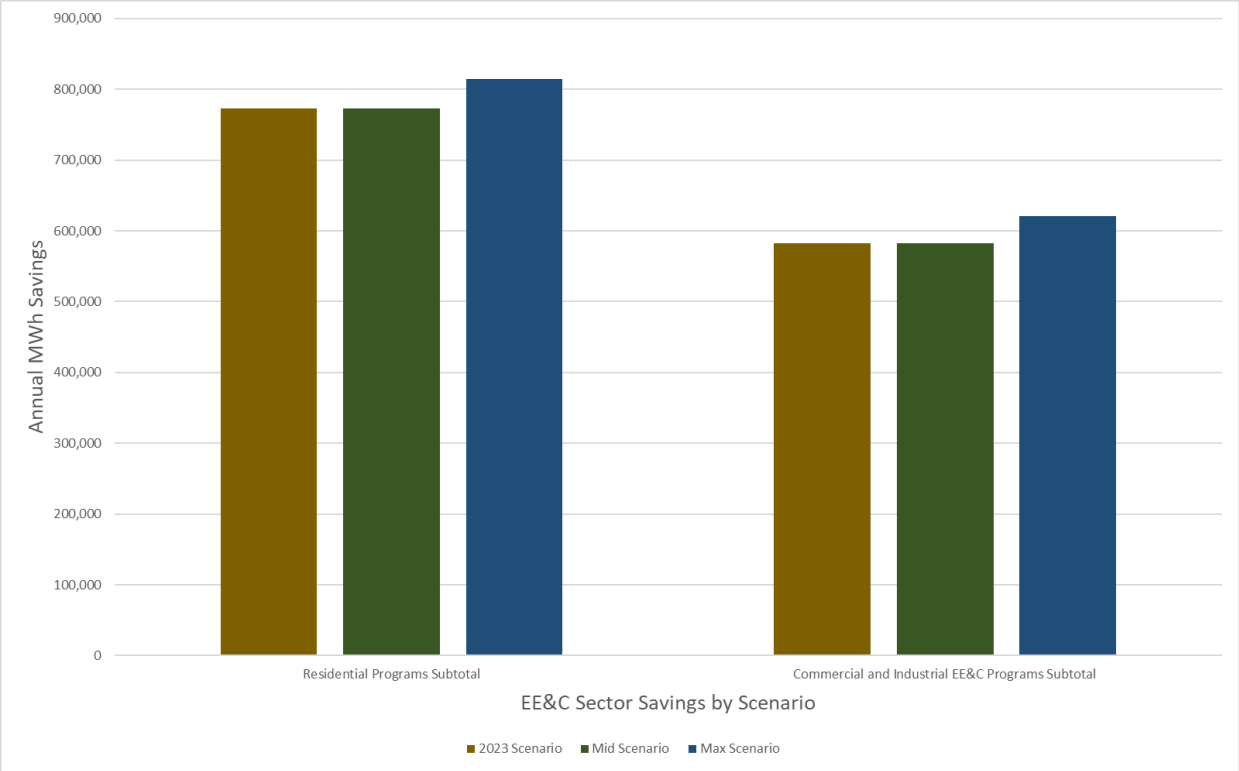
IV. OVERVIEW OF ELECTRIC UTILITY PLANS

As required by the Commission, each of the electric utilities' Plans included estimated costs and savings, as well as brief descriptions, for three scenarios, each of which is to comply with the electric energy efficiency ("EE") savings required by the Climate Solutions Now Act ("CSNA"). There are some similarities, as well as considerable differences in how the utilities interpreted how much EE should be included in each scenario and which programs should be prioritized to obtain the required savings.

A. Sector Level Savings in each Scenario

The Energy Efficiency and Conservation ("EE&C") savings in BGE's 2023 and Middle scenarios are identical, and increase by only a slight margin in the Maximum scenario, as illustrated in Figure 1:

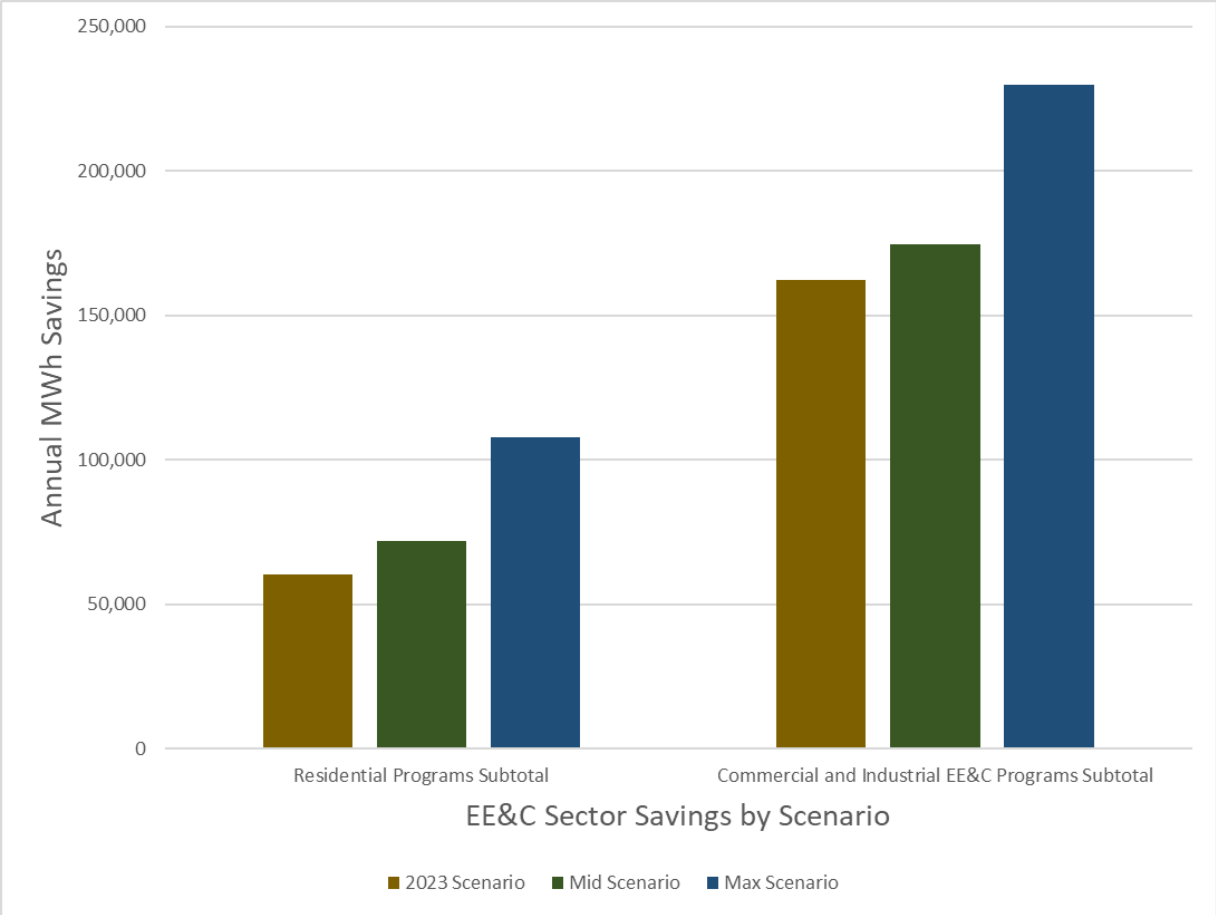
Figure 1: BGE EE&C 2024-2026 Sector Savings by Scenario[16]



[16] Baltimore Gas & Elec. Co. EmPOWER Program Plan ("BGE 2024-26 Plan") (Aug. 1, 2023), ML# 304397. Data from Table ES-1 Net 2023 Scenario, Table ES-1 Net Middle Scenario, Table ES-1 Net Maximum Scenario.

In contrast, Delmarva shows incremental EE&C savings increases in each scenario, with more significant growth between the 2023 and Maximum scenarios, as shown in Figure 2:

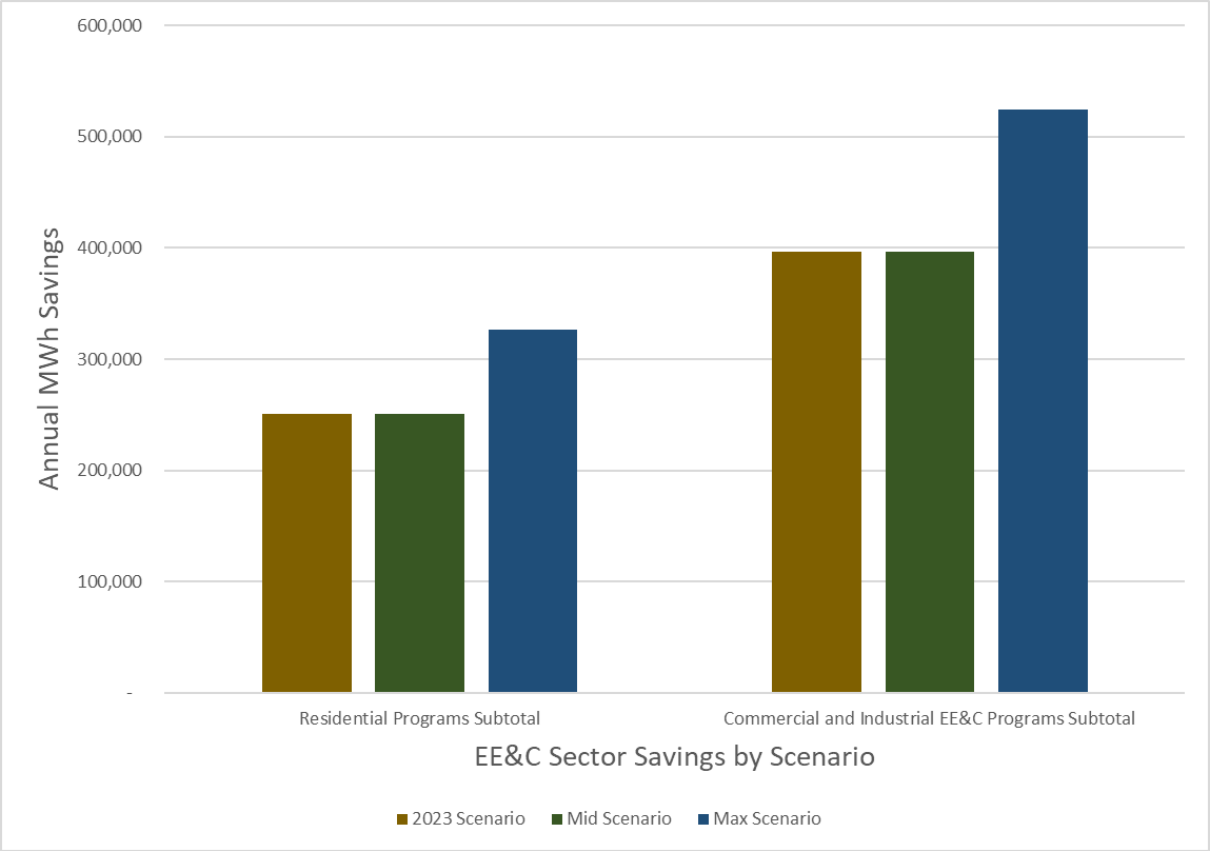
Figure 2: Delmarva EE&C 2024-2026 Sector Savings by Scenario[17]



Like BGE, Pepco proposed no EE&C increases from the 2023 to Middle scenarios, but proposed more significant increased savings than BGE for the Maximum scenario:

[17] Delmarva Power & Light Co. EmPOWER Program Plan ("Delmarva 2024-26 Plan") (Aug. 1, 2023), ML# 304394. Data from Table ES-1 Net 2023 Scenario, Table ES-1 Net Middle Scenario, Table ES-1 Net Maximum Scenario.

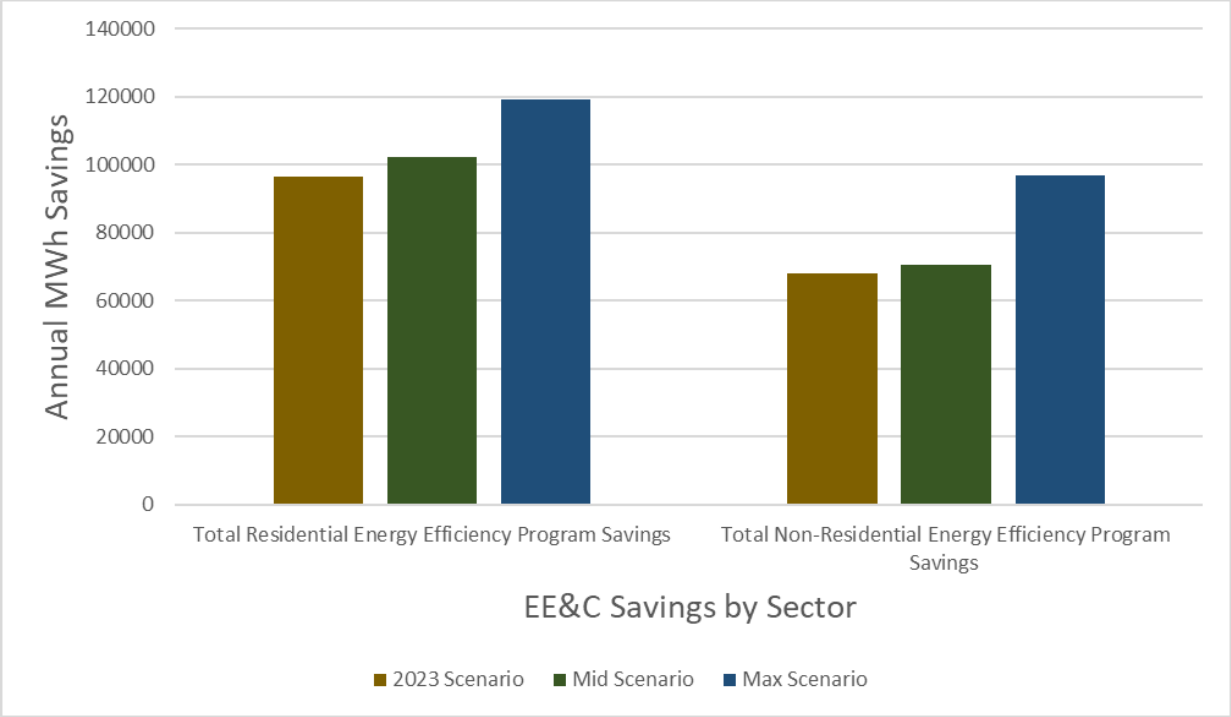
Figure 3: Pepco EE&C 2024-2026 Sector Savings by Scenario[18]



[18] Potomac Elec. Power Co. 2024-2026 EmPOWER Program Plan ("Pepco 2024-26 Plan") (Aug. 1, 2023), ML# 304395. Data from Table ES-1 Net 2023 Scenario, Table ES-1 Net Middle Scenario, Table ES-1 Net Maximum Scenario.

Like Delmarva, SMECO proposed an incremental EE&C increase from the 2023 to Middle scenarios, with a larger increase from the Middle to Maximum scenarios, as seen in Figure 4:

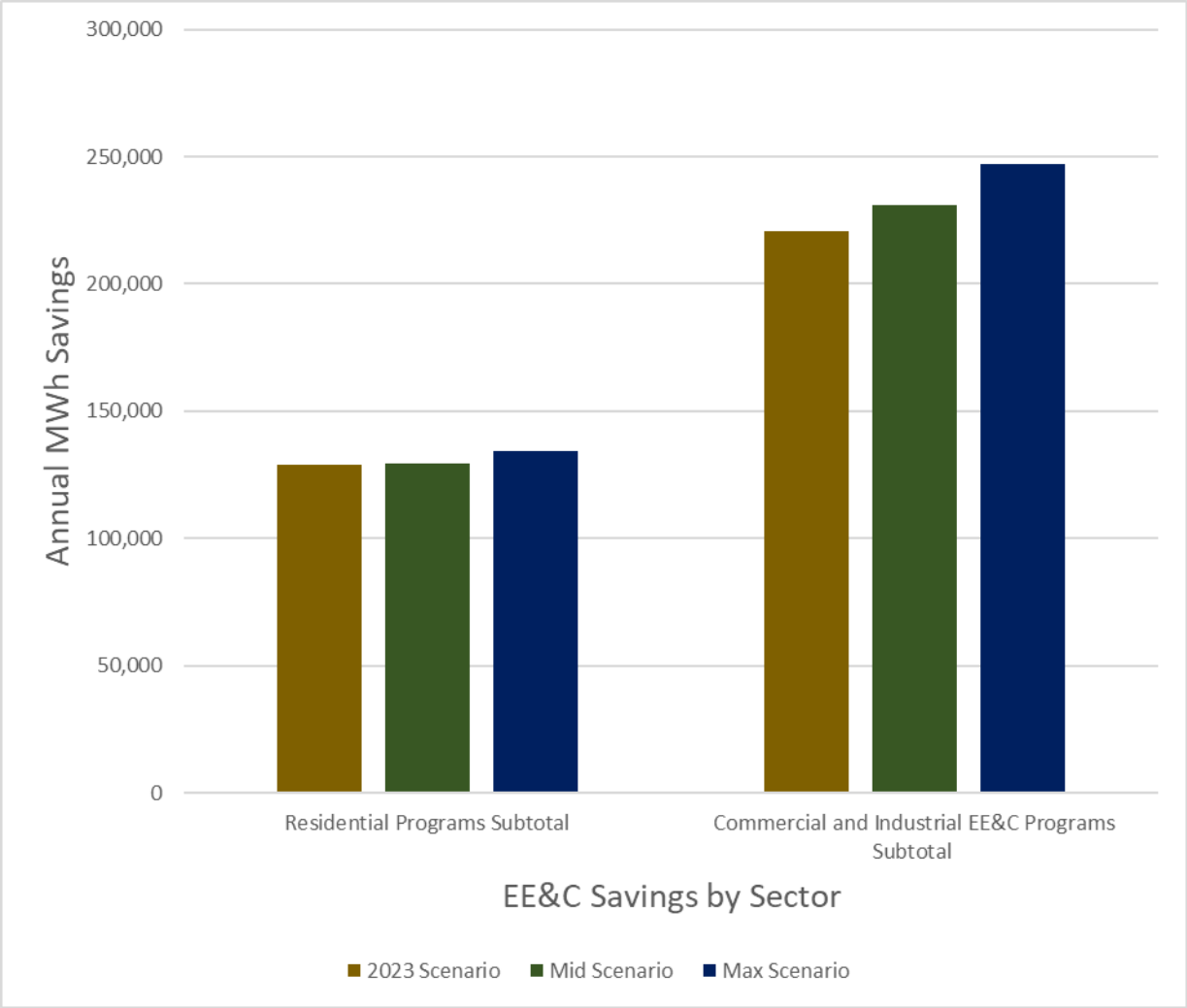
Figure 4: SMECO EE&C 2024-2026 Sector Savings by Scenario[19]



Lastly, PE held residential sector savings very close to flat across all three scenarios and increased non-residential savings slightly between the 2023 and Middle scenarios and again between the Middle and Maximum scenarios. This is shown in Figure 5:

[19] Southern Maryland Elec. Coop., Inc. 2024-2026 EmPOWER Program Plan ("SMECO 2024-26 Plan") (Aug. 1, 2023), ML# 303835. Data from Table ES-1 Net Revised 2023 Scenario, Table ES-1 Net Revised Middle Scenario, Table ES-1 Net Revised Maximum Scenario.

Figure 5: PE EE&C 2024-2026 Sector Savings by Scenario[20]



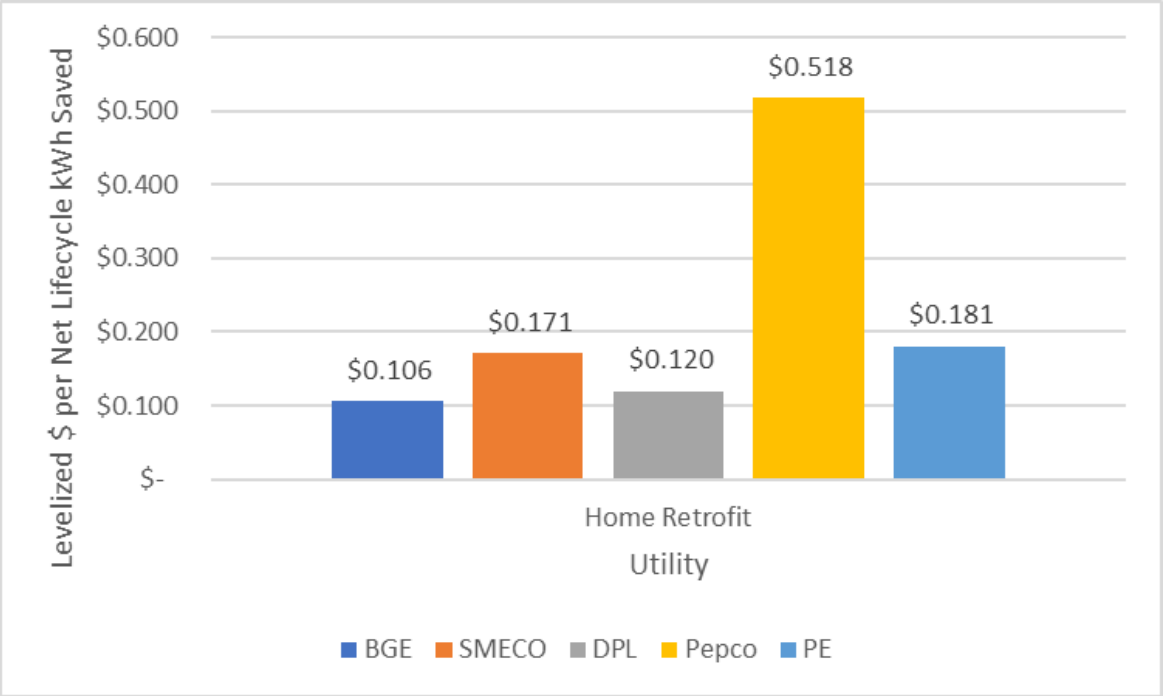
B. Estimated Utility Lifecycle Costs

There is little similarity in the utilities' cost proposals, with the lifecycle costs varying widely within individual program categories and across the residential and non-residential sectors as a whole. For example, Figure 6 shows each electric utility's proposed cost per

[20] Potomac Edison Co. 2024-2026 EmPOWER Program Plan ("PE 2024-26 Plan") (Aug. 1, 2023), ML# 304456. Data from Table ES-1 Net Revised 2023 Scenario, Table ES-1 Net Revised Middle Scenario, Table ES-1 Net Revised Maximum Scenario.

lifecycle kWh saved for the 2026 Home Retrofit program in the Middle Scenario. The proposed costs range by nearly 500%, from $0.181 for PE and $0.171 for SMECO to $0.518 for Pepco.

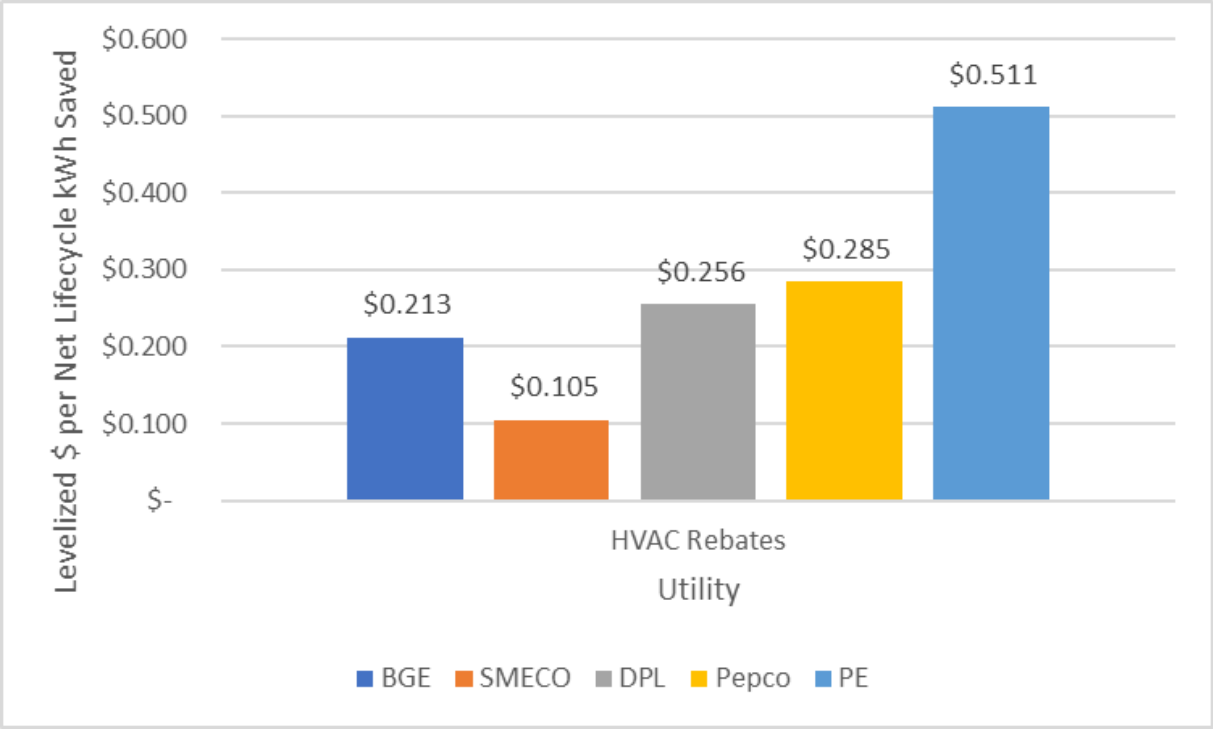
Figure 6: 2026 Net Lifecycle Total Home Retrofit Program Costs for Middle Scenario[21]



The variation is also great for the utilities' proposed HVAC rebates programs, as shown inFigure 7, with SMECO's lifecycle HVAC cost at $0.105 per kWh saved and PE's cost nearly 5 times higher at $.511.

[21] BGE 2024-26 Plan, Table ES-5 Net Middle Scenario; SMECO 2024-26 Plan, Table ES-5 Net Revised Middle Scenario; Delmarva 2024-26 Plan, Table ES-5 Net Middle Scenario; Pepco 2024-26 Plan, Table ES-5 Net Middle Scenario; PE 2024-26 Plan, Table ES-5 Net Middle Scenario.

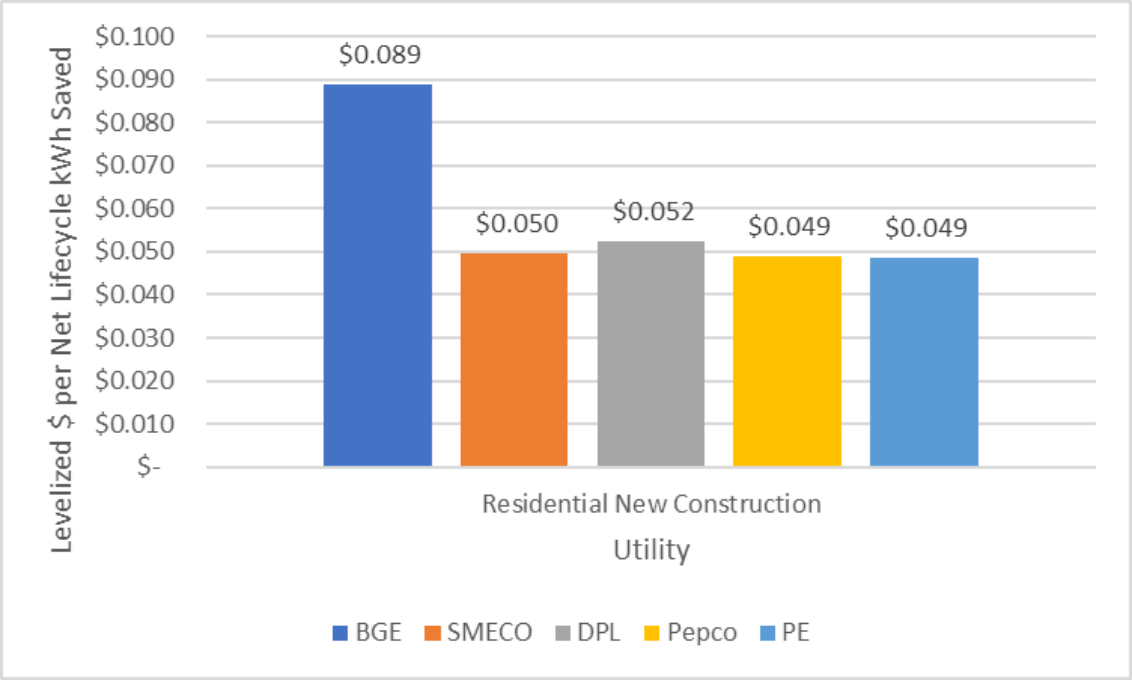
Figure 7: 2026 Net Lifecycle Total HVAC Program Costs for Middle Scenario[22]



The utilities' residential new construction program proposals are much closer in cost to each other with the exception of BGE, which is nearly double the estimated cost of the other utilities, as seen in Figure 8 :

[22] *Id.*

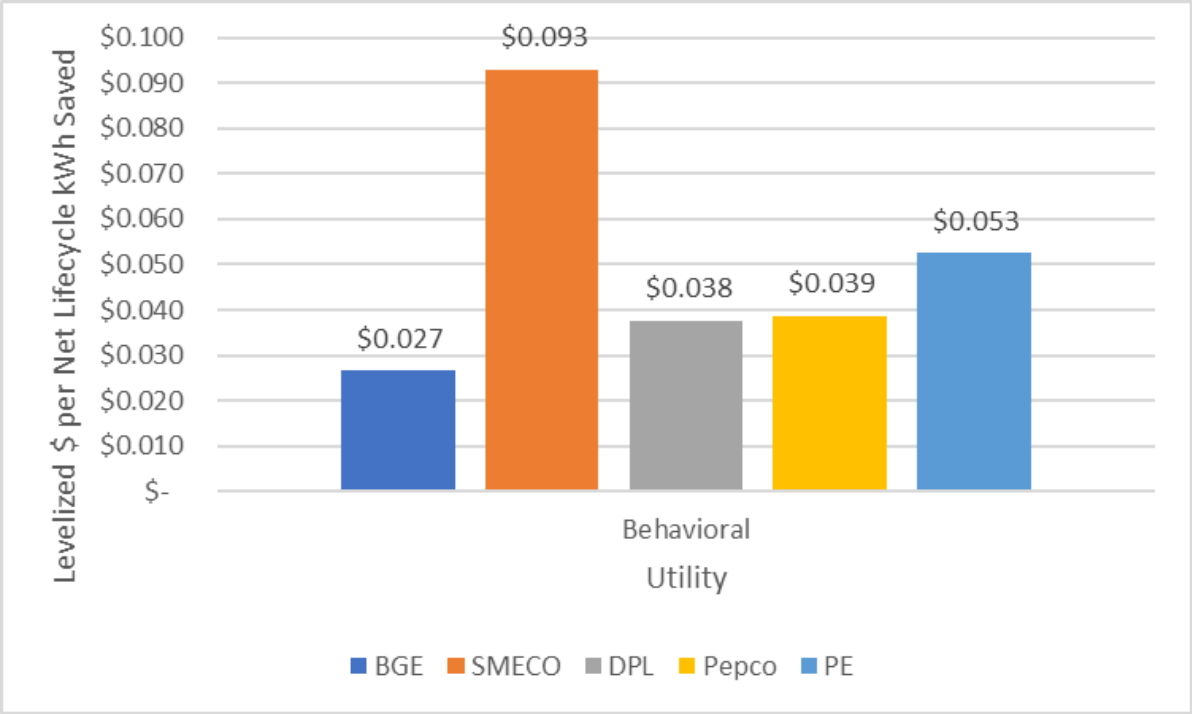
Figure 8: 2026 Net Lifecycle Total Residential New Construction Program Costs for Middle Scenario[23]



Behavioral program costs also vary widely. In the case of this program SMECO is the outlier, though PE's behavior program is twice the cost of BGE's, as seen in Figure 9 :

[23] *Id.*

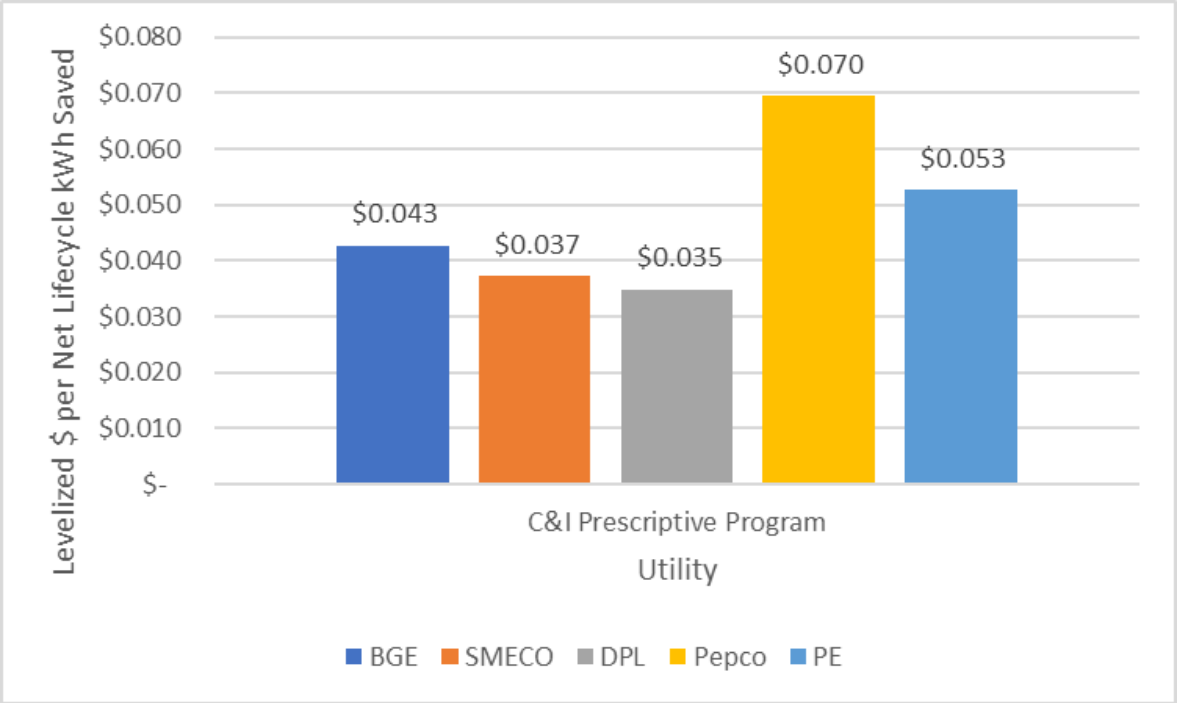
Figure 9: 2026 Net Lifecycle Total Residential Behavioral Program Costs for Middle Scenario[24]



The cost variations are not limited to the residential EE&C programs. Figure 10 shows proposed costs for the non-residential prescriptive programs, with PE having a proposed cost that is double Delmarva and SMECO and roughly 50% more than BGE and PE.

[24] *Id.*

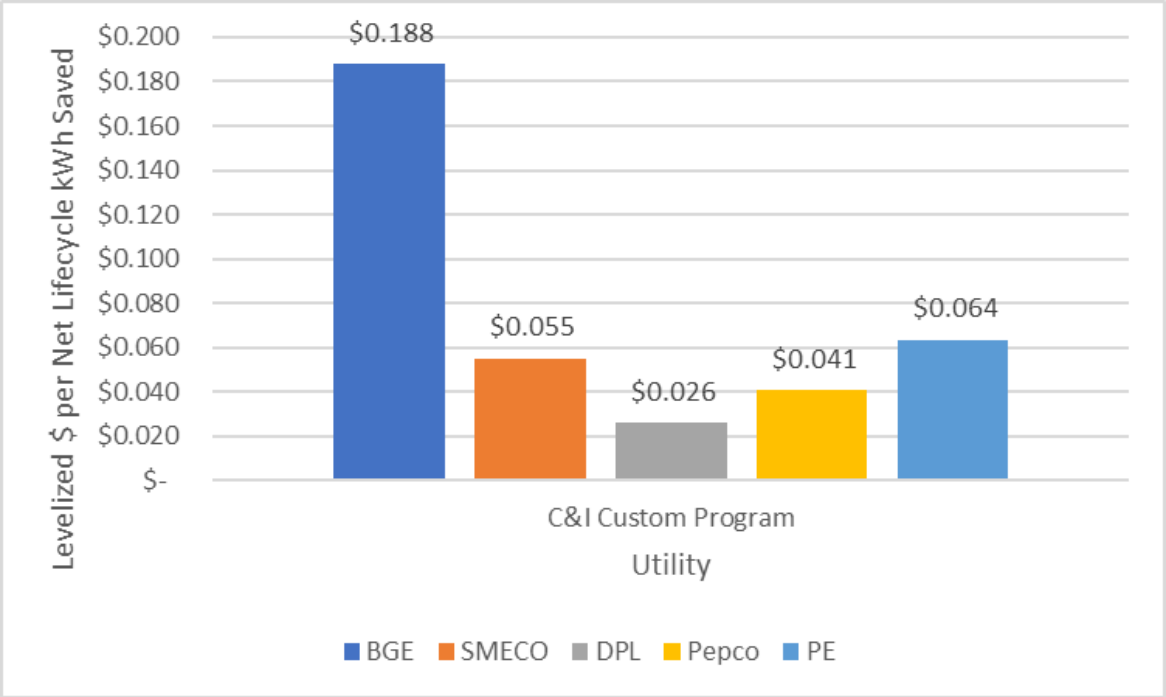
Figure 10: 2026 Net Lifecycle Total Non-residential Prescriptive Program Costs for Middle Scenario[25]



In the case of non-residential custom programs, BGE's proposed cost is more than 7 times Delmarva's, and three to four times the other utilities' proposed cost, as shown in :

[25] *Id.*

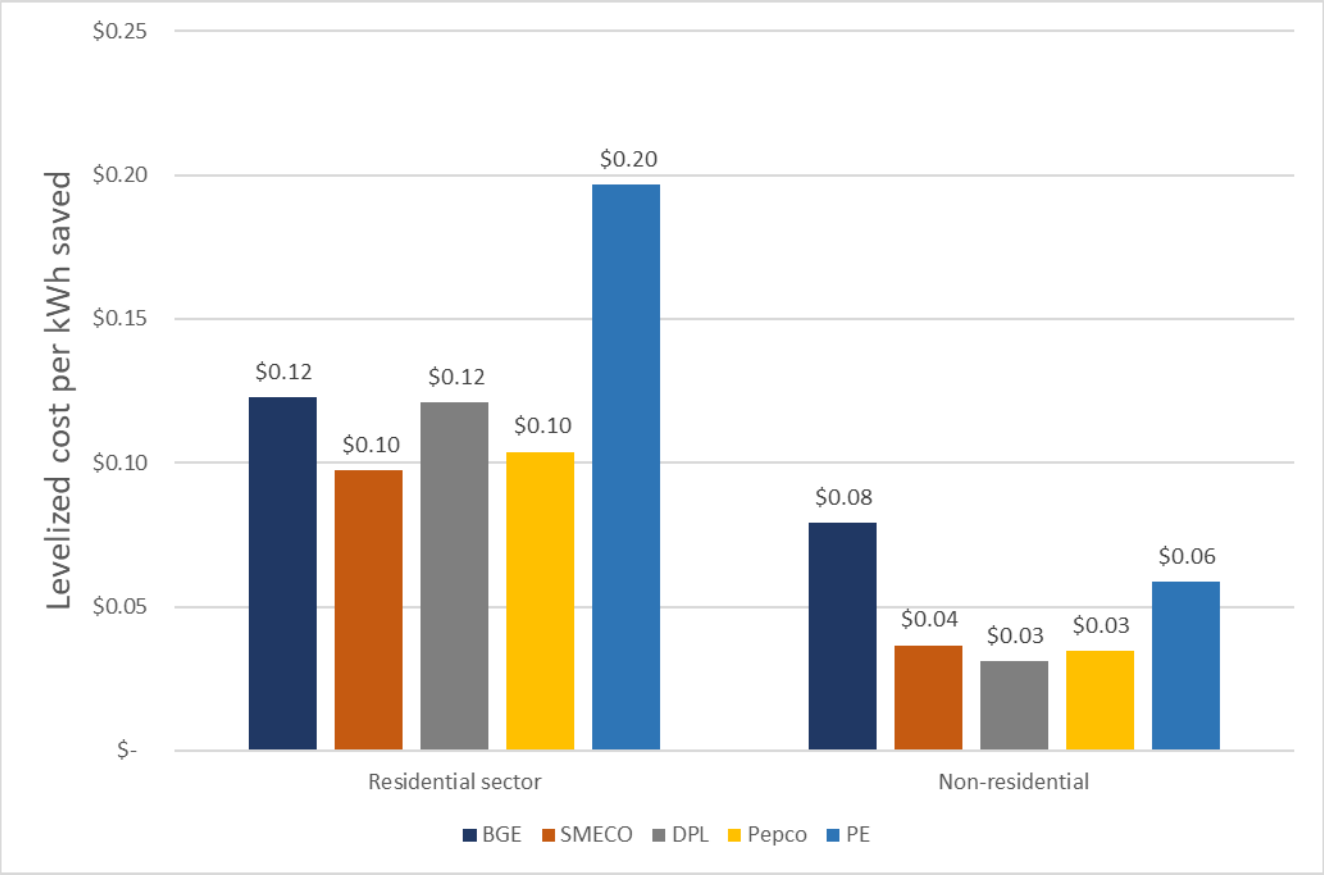
Figure 11: 2026 Net Lifecycle Total Non-residential Custom Program Costs for Middle Scenario[26]



When the various programs proposed by the utilities are combined and viewed at the sector level the variations in cost persist. As Figure 12 shows, PE's residential sector costs are double those proposed by SMECO and Pepco, and BGE's non-residential costs are double – or more than double – those proposed by SMECO, Pepco, and Delmarva.

[26] *Id.*

Figure 12: 2024-2026 Lifecycle Total Sector Costs for 2023 Scenario[27]

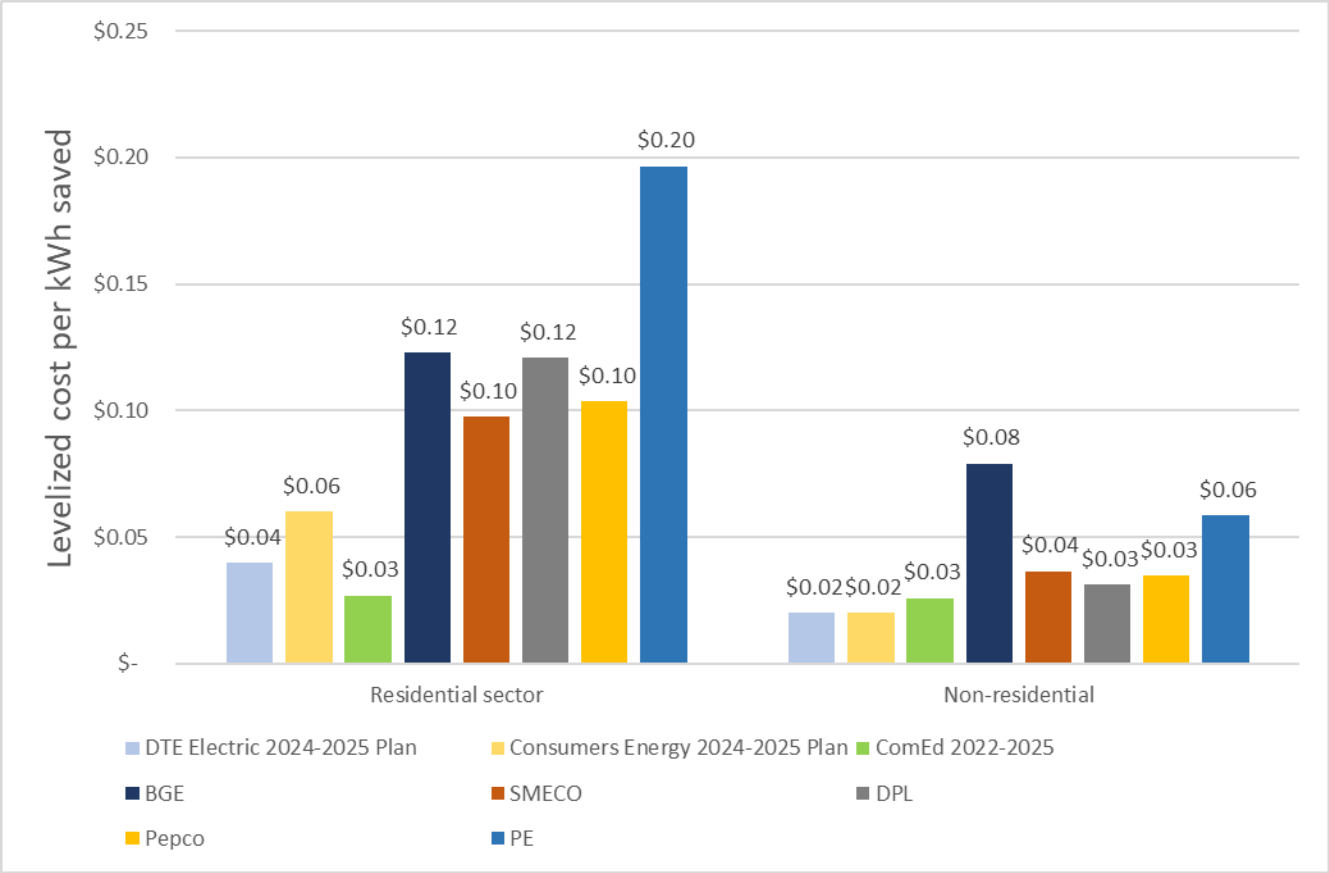


What is more, the cost per lifecycle kWh saved proposed by the EmPOWER utilities are all higher than the costs proposed in recent utility plans in other jurisdictions. Figure 13 includes the EmPOWER utility cost comparison in Figure 12, and adds expected lifecycle costs for Consumers Energy's 2024-2025 Energy Waste Reduction Plan, DTE Electric Company and DTE Gas Company's 2024-2025 Energy Waste Reduction Plan, and Commonwealth Edison Company's Revised Energy Efficiency and Demand Response Plan, 2022–2025. It is MEEA's understanding that these other utilities all propose portfolios that do not include retail screw-

[27] *Id.*

based LED promotion, and that approach 2% net annual energy savings – arguably more than the EmPOWER utilities 2% gross savings target. In addition, Consumers' costs include income-qualified programs, while DHCD program costs are not included in the EmPOWER portfolio costs, and would presumably skew lifecycle costs higher.

Figure 13: Net Lifecycle Cost Comparison for EmPOWER 2023 Scenario Savings and DTE, Consumers, and ComEd[28]



[28] *Id.* DTE information from Michigan Pub. Serv. Comm'n ("MPSC") Case No. U-21322, 2024 – 2025 Energy Waste Reduction Plan, Exh. A-12 (June 29, 2023), https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000008K2DyAAK; MPSC Case No. U-21321, *Application for Approval of Consumers Energy Company's 2024 – 2025 Energy Waste Reduction Plan*, Exh. A-2 (EAM-2), at 10 of 211 (Aug. 1, 2023), https://mipsc.my.site.com/sfc/servlet.shepherd/version/download/0688y000008yCJ8AAM; Illinois Commerce Comm'n Docket No. 21-0155, Commonwealth Edison ("ComEd")

The differences in cost estimates are startling and raise serious questions about why the EmPOWER proposals are so much more costly than those of utilities in other jurisdictions. While differences in the types of customers in each utility's service territory, the relative emphasis on certain measures over others, and possible differences in how the lifecycle costs are calculated can certainly explain some amount of program cost difference, it is difficult to see why the costs should be as dramatically different as they are – both when comparing only the EmPOWER utilities and even more when considering DTE, Consumers, and ComEd. Two things seem abundantly clear from the comparisons made above:

1. Based simply on the utility they are served by, Maryland's ratepaying customers would appear to be positioned to receive greatly differing benefits from the EmPOWER investments their respective utilities propose to make on their behalf, and;
2. These customers stand to benefit from a detailed, independent examination of the utilities' proposed EmPOWER costs that would inform a uniform, best-practices approach to program implementation.

In many jurisdictions, detailed scrutiny of proposed program costs is conducted to ensure that customers are not asked to pay more for energy efficiency than necessary. Looked at another way, ensuring that programs are delivered in a cost-efficient manner enables customers to get as much energy efficiency as possible for their investments. Given the Commission's repeated concerns about the bill impacts of EmPOWER, and the cost pressure of achieving the State's

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Company's Revised Energy Efficiency and Demand Response Plan 2022 – 2025, at Table 5.5 of ComEd Ex. 1.01R (Mar. 1, 2022), https://icc.illinois.gov/docket/P2021-0155/documents.

climate goals, it only makes sense for the Commission to have confidence that the utilities are efficient and effective in delivering programs and that customer benefits are maximized. In MEEA's view it is unreasonable for customers of one utility to bear program costs that are much higher than the costs of similar programs borne by neighbors who are served by a different utility. To this end MEEA respectfully recommends the Commission take two specific actions: first, ***MEEA recommends the Commission direct an independent evaluation for cost benchmarking and best-practices review of the EmPOWER utilities, as compared with one another and with leading utilities nationally, to determine whether the cost proposals provided in the Plans are reasonable and reflective of best practices. MEEA further recommends the Commission require utilities to eliminate redundant program administrative structures and pursue joint program implementation wherever practicable.*** The onus should be placed on the utilities to justify any proposal that does not conform to streamlined administration and implementation and uniform adoption of best program practices.

C. Bill Impacts

At the Commission's direction, the utilities provided analyses of the bill impacts of the proposed program costs. The analyses make no projections about the bill savings that will benefit participating customers or the effect that reduced loads resulting from EE and DR will have on deferring, reducing, and eliminating other costs that ratepayers would bear in the absence of EE and DR – they only look at the direct costs to customers resulting from utility program costs. This is in sharp contrast to the types of bill impact analyses conducted in some other jurisdictions. Rhode Island Energy, for example, includes analyses as an attachment to its 2024 Annual Plan which finds that "[o]verall, rates may increase, but energy savings from participation in electric EE programs results in bill savings that offset the costs of the EE

program charge and revenue recovery."[29] The analysis "incorporates how system-wide reduction in energy consumption affects the different elements of rates such as transmission, distribution, and commodity charges." [30] A similar analysis conducted for the EmPOWER programs could better inform the Commission with a fulsome view of the rate and bill impacts of the EmPOWER programs. In addition it appears that the bill impacts include the total of impacts from prior EmPOWER investments as well as those from the proposed 2024-2026 scenarios. While this is certainly an important perspective to consider, it obscures the relative impact of different levels of investment during the upcoming 2024-2026 period, making it more challenging for parties and the Commission to gauge the costs and benefits of different scenarios.

Each utility bases its bill impacts projections on the amount of energy an average customer in its service territory is expected to use in an average month, and these estimates vary considerably across the utilities, as shown in Table 1 for residential customers:

Table 1: Average Residential Monthly Bill Impacts in Utilities' Calculations, 2023 Scenario[31]

Utility	kWh/month	2024-2026 Average Surcharge per kWh	2024-2026 Average Monthly Bill Impact
BGE	880	0.0176	$ 15.46
Delmarva	1004	0.0175	$ 17.60
PE	1114	0.0143	$ 15.94
Pepco	876	0.0196	$ 17.17
SMECO	1200	0.0174	$ 20.92

[29] Rhode Island Pub. Utils. Comm'n & Div. of Pub. Utils. & Carriers, Docket 22-33-EE, *The Narragansett Electric Company d/b/a Rhode Island Energy 2023 Energy Efficiency Plan*, *2024 Annual Plan Attachment 7*, at 1 (Sept. 7, 2023), http://rieermc.ri.gov/wp-content/uploads/2023/09/07_2024-annual-plan_attachment-7_bill-rate-impacts_9.7.23.pdf.
[30] *Id.* at 2.
[31] BGE 2024-26 Plan, Attachment 5; Delmarva 2024-26 Plan, Attachment 4; PE 2024-26 Plan, Table 10; Pepco 2024-26 Plan, Attachment 4; SMECO 2024-26 Plan, Attachment 4.

Considering each utility's average residential usage leads to differing estimates of bill impacts, even though the average surcharges for BGE, Delmarva, and SMECO are within $0.0002 per kWh of one another. MEEA suggests the Commission may also find it useful to consider the bill impacts for a household that uses the same amount of electricity regardless of which utility it is served by. These calculations for a customer using the approximate average of the five EmPOWER utilities are shown in Table 2, and indicate that a BGE customer would have a similar EmPOWER bill impact as a Delmarva or SMECO customer using a similar amount of electricity each month, while a PE customer would have lower monthly EmPOWER costs and a Pepco customer's costs would be higher.

Table 2: Average Residential Monthly Bill Impacts using 1,000 kWh/month, 2023 Scenario[32]

Utility	kWh/month	2024-2026 Average Surcharge per kWh	2024-2026 Average Monthly Bill Impact
BGE	1000	0.0176	$ 17.57
Delmarva	1000	0.0175	$ 17.53
PE	1000	0.0143	$ 14.31
Pepco	1000	0.0196	$ 19.60
SMECO	1000	0.0174	$ 17.43

Importantly, the fact that the residential programs proposed by PE have both the lowest rate impact, as shown in Table 2, and at the same time have by far the highest lifecycle cost per kWh saved as shown in Figure 12 suggest that residential customers of PE are receiving far fewer benefits from the EmPOWER programs than other utility customers may be receiving. This finding supports MEEA's recommendation that the Commission should direct an independent evaluator to assess the relative costs and benefits of the different utility proposals in

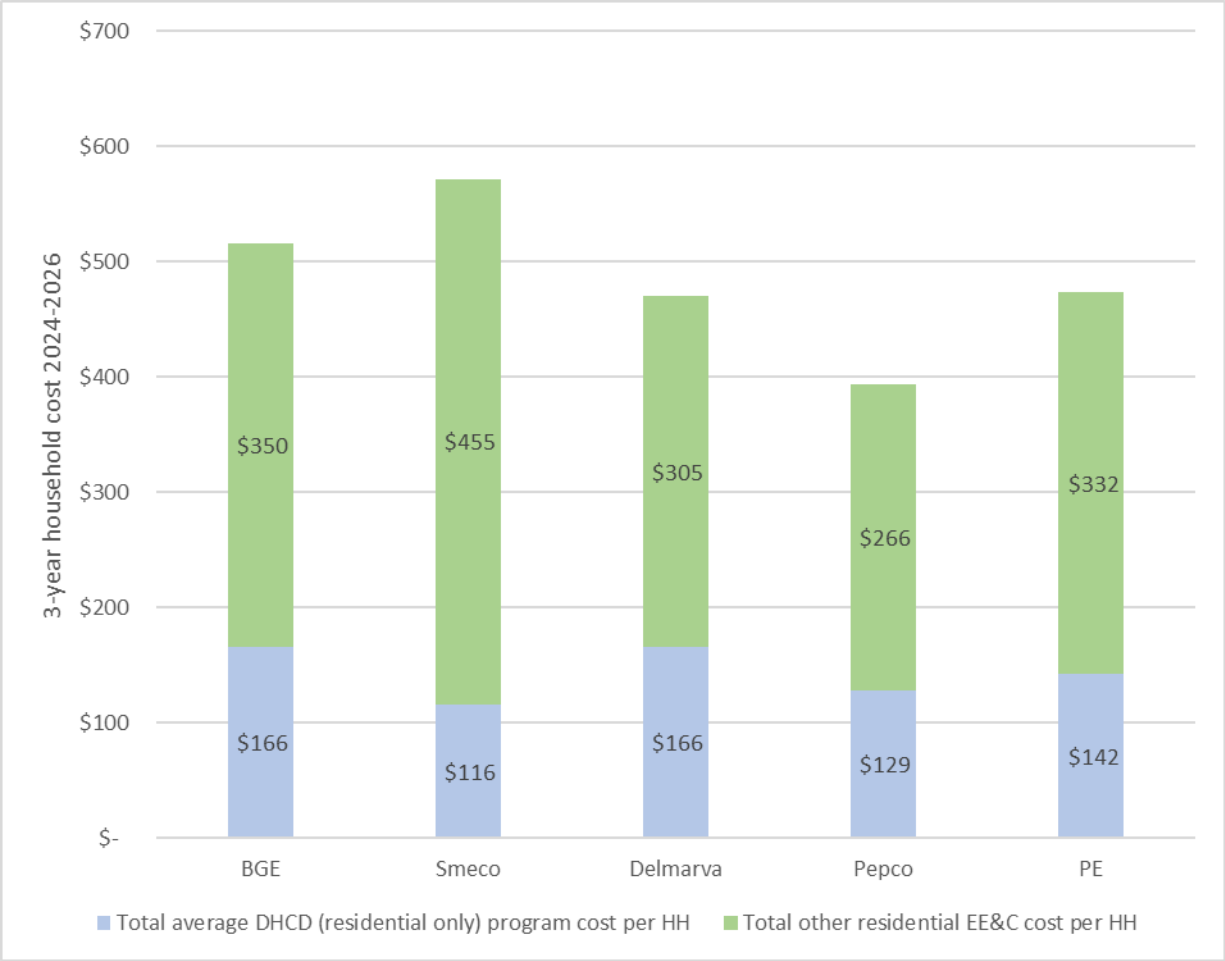
[32] *Id.*

support of a more unified implementation approach that ensures all EmPOWER customers have similar opportunities available to them and that they pay similarly for them.

D. Bill Impacts on Limited Income Households

Yet another way to consider the relative costs of the different utilities' proposals is to look at the average cost per household by simply dividing the proposed budgets by the number of households. MEEA has done such an analysis, using the number of households provided in DHCD's Plan. The results of this calculation are shown in Figure 14:

Figure 14: Average per Household 3-year EmPOWER Cost, Middle Scenario plus DHCD[33]



For the utilities' Middle scenarios combined with DHCD's Plan the average three-year total cost per household ranges from a low of $394 for a Pepco household to a high of $572 for SMECO. This is an extraordinary range of costs for effectively similar program offerings, noting that this analysis is not dependent on the amount of electricity a household uses, but rather is simply the total three-year cost per residential customer. Because limited income households pay

[33] Utility program Residential EE&C costs from Table ES-3D for the Middle Scenario, excluding electrification program costs. DHCD program costs from Table ES-3D, Residential programs only. Number of households per utility territory from DHCD Plan, Maryland Dep't of Housing & Community Dev. ("DHCD") Response to MEEA Data Request No. 13 (Corrected Table 12) (attached as Appendix A at 2 of 2).

the same rates as other residential customers, on average a limited-income customer in SMECO territory will pay 45% more towards EmPOWER than a household with the same income in Pepco territory. It is not at all clear why this should be the case. Figure 14 also shows that the per household cost for non-LI programs is considerably higher than for LI programs – in the range of twice, to nearly four times as high. This means that LI households will be paying much more towards the costs of programs for non-LI households than for the LI programs that may benefit them directly. Of course, because the surcharge is a volumetric charge, households that use more electricity will pay a higher portion of the program costs than those that use less.

This simple analysis also amplifies a concern raised by MEEA in the Future Programming Work Group:

> *MEEA raised an issue about how the Commission would determine the level of investment in LI programs within each utility's territory. MEEA pointed out that the presence of income-eligible households as a percentage of all residential customers is disproportionate by utility, which suggests there should be a greater level of investment, participation, and savings in LI programs for the Utilities with more LI-eligible customers than for those with fewer LI customers. However, this would likely also result in a higher surcharge for those utilities with more income-eligible customers which would disproportionally increase energy burdens in territories that already have more struggling households. Analysis by CADMUS suggests that the surcharge impact on LI household energy burdens is already highly uneven depending on which utility territory the household is located in.*[34]

Clearly the per household DHCD program cost is highest in Delmarva territory which has the highest percentage of LI customers, and it is lowest for SMECO, which has the lowest percentage of eligible households. This is shown in Table 4:

[34] Case No. 9648*, In the Matter of the 2021-2023 EmPOWER Maryland Program ("Case No. 9648")*, Future Programming Work Group Report ("Future Programming Work Group Report"), at 25 (Apr. 15, 2022), ML# 240203 (emphasis added).

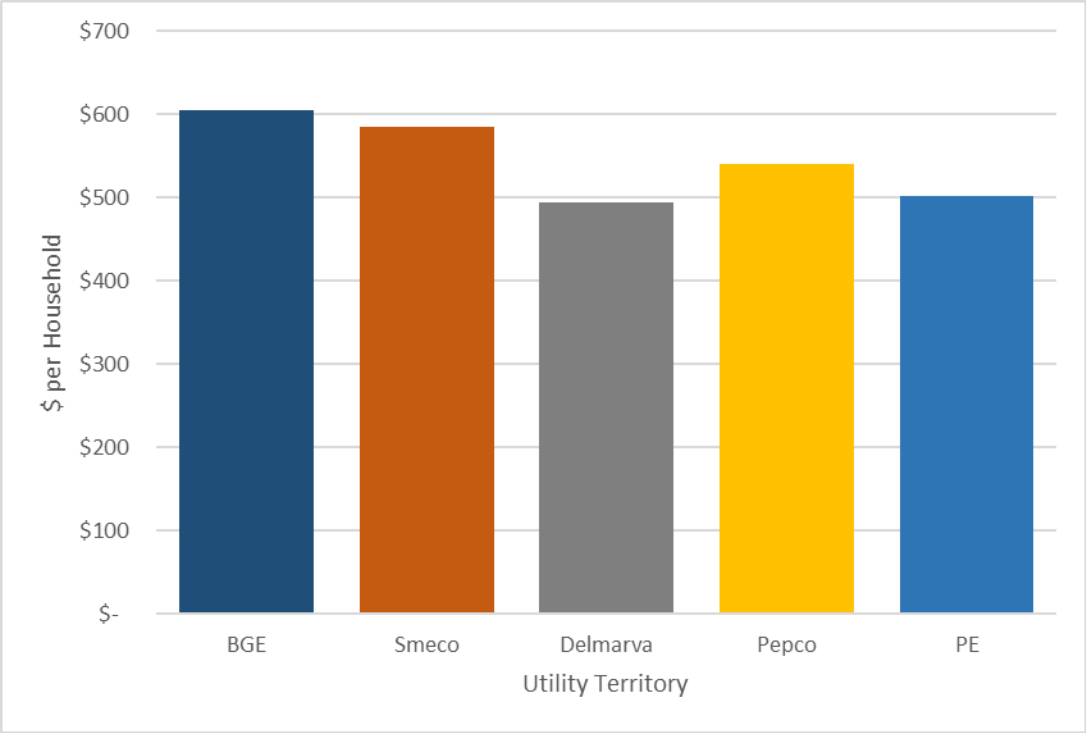
Table 3: DHCD Average Surcharge cost per Household

	DHCD $ per Household	% of LI Households
BGE	$166	27%
Delmarva	$166	34%
PE	$142	28%
Pepco	$129	24%
SMECO	$116	20%

In developing its Plan, "DHCD reviewed the most recent research and studies on the distribution of limited-income customers in the state that were produced by APPRISE and Cadmus. These distributions influenced how DHCD designed the programs described herein and determined the most equitable distribution of funds across utility territories and housing types to reach the most customers, while accounting for the program that would best serve them."[35] DHCD does not propose that the spending per LI household will be equal in each utility territory. Figure 15 shows that the proposed budget ranges from $494 per eligible household for Delmarva to $605 for BGE.

[35] Maryland Dep't of Housing & Community Development 2024-2026 EmPOWER Program Plan ("DHCD 2024-26 Plan"), at 25 (Aug. 1, 2023), ML# 304379.

Figure 15: DHCD 2024-2026 Budget per LI Household by Utility Territory[36]



To put it bluntly, LI households in Delmarva territory, where they represent the highest fraction of total households among the EmPOWER utilities, will pay more towards EmPOWER and receive less in total benefits than households with the same income as a household served by SMECO. MEEA is not questioning DHCD's approach to determine the required level of investment per home. Rather we wish to illustrate through Table 4, Figure 14, and Figure 15 that the combination of utility and DHCD budgeting approaches, if approved by the Commission, will lead to significantly different cost and value impacts for limited income households based solely on which utility serves a given household, which is an arbitrary and unreasonable basis for this distinction. As raised previously, MEEA finds it to be inequitable and unreasonable for

[36] *Id.* at 28, Table 12; DHCD program costs from Table ES-3D, Residential programs only. Number of LI households per utility territory.

households with the same income and annual electricity use in different utility service territories to experience the costs and benefits of EmPOWER so differently. ***MEEA respectfully recommends the Commission implement a "surcharge cap" for LI households so that, regardless of which utility service territory they reside in, they pay no more than $50 per year for EmPOWER costs.*** This will dramatically reduce inequities in allocation of costs to LI households in the state and ensure that a LI household will not pay more for EmPOWER than a similarly situated household simply because of where they live.

MEEA recognizes that implementing such a cost cap will require a process for determining eligibility, and that it will shift a portion of program costs away from LI households to others. Implementing a more comprehensive solution, such as a percent-of-income-payment-plan ("PIPP") would also protect LI ratepayers from paying inequitably high costs for their energy usage, in a way that is more comprehensive and uniform across different dockets. While PIPP development falls outside the scope of this proceeding, MEEA strongly urges the Commission to consider a PIPP as a critical solution that would protect LI ratepayers across all dockets, and in the meantime, urges the Commission to impose the surcharge cap recommendation described above. MEEA respectfully encourages the Commission to provide direction to the utilities to develop and propose PIPP rate proposals in an appropriate case, as it has been authorized to consider under the Maryland Code for Public Utilities § 4-309. While not a legal opinion, MEEA believes that this statute would give the Commission authority to approve either the proposed surcharge cap or a PIPP. Section § 4-309 states that "[s]ubject to the approval of the Commission, a utility company shall adopt a limited income mechanism to benefit an eligible limited-income customer [which] may take the form of a program, tariff provision,

credit, rate, rider, or other means to assist an eligible limited-income customer to afford a utility service.[37]

V. ELECTRIC UTILITY BEHIND-THE-METER PROGRAMS

A. General Overview

Across the board the electric EmPOWER utilities propose predominantly to continue implementation of the same programs they have been offering their customers. The primary exception to this is that due to increased lighting efficiency standards the utilities will no longer implement the retail lighting promotions that have been a mainstay of past savings performance. In addition, the 20% cap on front-of-the-meter ("FTM") savings reduces, for some utilities, the savings they propose to obtain from Conservation Voltage Reduction ("CVR"), which as a result requires additional increases to non-lighting BTM programs. While the utilities observe that such program changes will increase portfolio costs it is important to note that they will also increase the longevity of program savings, providing longer-lasting, reliable electricity savings and resultant GHG emissions reductions. MEEA believes that increasing the availability and reach of efficiency programs that focus on the installation and effective operation of high efficiency equipment and appliances, along with building shell efficiency improvements will provide the greatest benefits to Maryland's households and businesses – both in terms of energy savings and emissions reductions.

Relative to their 2021-2023 Plans, most of the utilities propose to make up for the cessation of lighting program savings and their reduced ability to attribute savings to CVR through a combination of increases in appliance rebates and recycling, home retrofits, behavioral programs, and prescriptive and custom programs for non-residential customers. Some utilities,

[37] MD Code, Public Utilities § 4-309 (c)(1) and (c)(2).

such as SMECO, propose increased HVAC program savings,[38] while others, such as BGE, propose to obtain fewer savings from HVAC measures. [39] MEEA supports increases in programs that provide long-lived, comprehensive savings for both the customer benefits they provide and for the grid savings and GHG emissions reductions associated with them. Unfortunately increases in programs that provide such benefits are quite limited compared to the increased behavior program savings proposed by each of the five electric utilities. MEEA believes that program elements that encourage efficient behaviors can provide value, especially when focused on providing tools and information that support realization of the savings from efficient technologies. For example, efficient heat pumps and smart thermostats may save more energy when configured and operated with efficiency in mind. Making sure that relevant information is provided to support the technology can improve overall program performance.

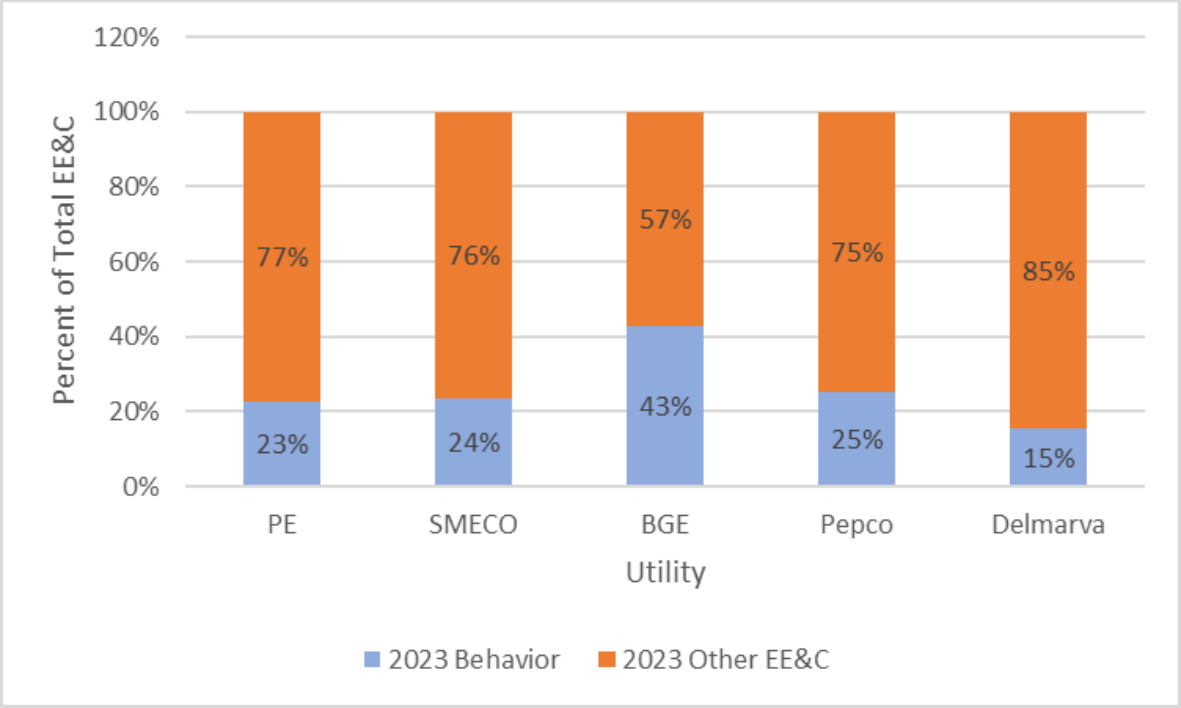
Unfortunately, when behavioral programs are used to achieve a very high fraction of a utility's total savings they often supplant comprehensive programs that could otherwise have a long-lasting effect in reducing customer bills and the associated GHG emissions that result from energy waste. This has been the case with the EmPOWER programs in the past and will continue to be the case if the Commission approves any of the scenarios as filed by the utilities. MEEA recommends the Commission direct the utilities to significantly increase the contribution of comprehensive, long-lived equipment and building improvement measures towards achievement of the statutory EmPOWER savings requirements.

[38] SMECO 2024-26 Plan, Table ES-1 Net 2023 Scenario.
[39] BGE 2024-26 Plan, Table ES-1 Net 2023 Scenario.

B. Continued Over-Reliance on Behavioral Programs

All of the utilities propose to continue to rely heavily on behavior program savings as a percentage of total EE&C savings, with BGE proposing nearly twice the reliance on behavior program savings in the 2023 scenario as any of the other electric utilities, as seen in Figure 16 :

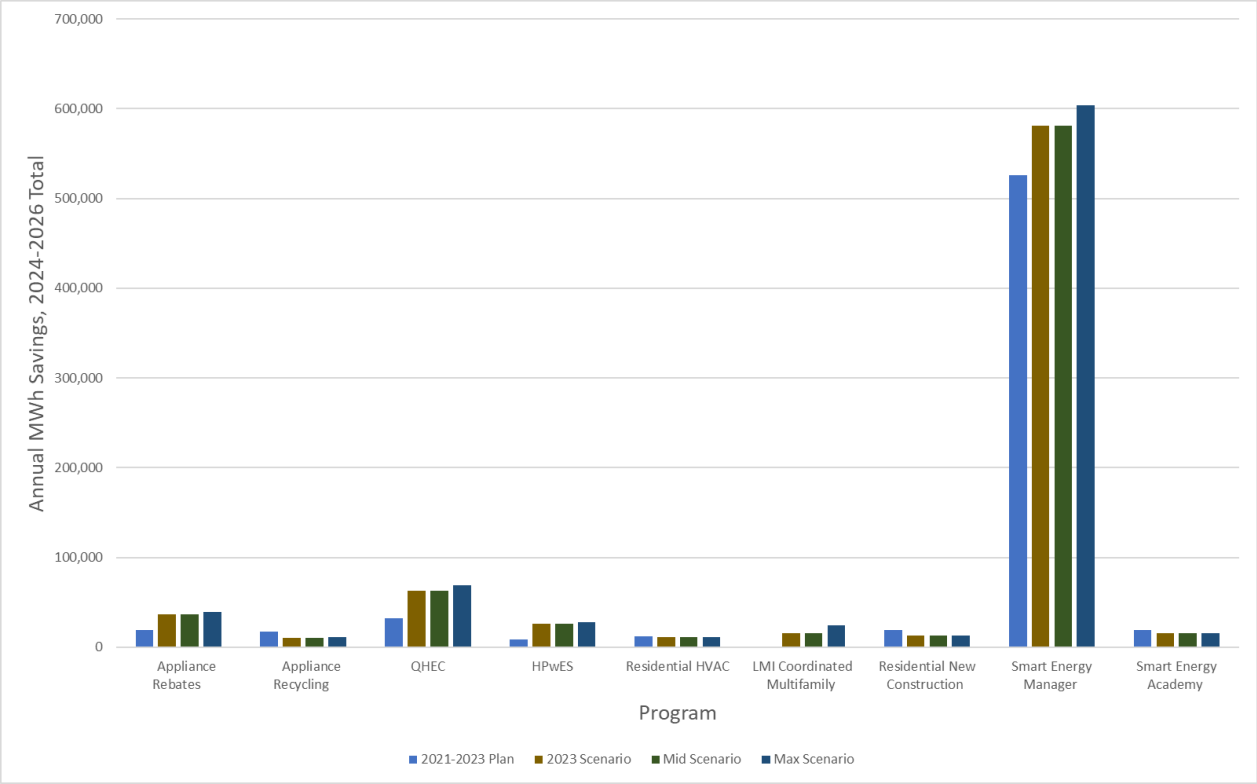
Figure 16: 2023 Scenario Behavior Net Savings Percent of Total Residential and Non-Residential EE&C[40]



A closer look at BGE's proposed residential portfolio savings shows that savings expected from non-lighting programs remain a relatively small portion of total savings compared with its Smart Energy Manager (behavior) program as shown in Figure 17:

[40] PE 2024-26 Plan, Table ES-1 Net Revised 2023 Scenario, 2024-2026 Total; SMECO 2024-26 Plan, Table ES-1 Net Revised 2023 Scenario; BGE 2024-26 Plan, Table ES-1 Net 2023 Scenario; Pepco 2024-26 Plan, Table ES-1 Net 2023 Scenario; Delmarva 2024-26 Plan, Table ES-1 Net 2023 Scenario.

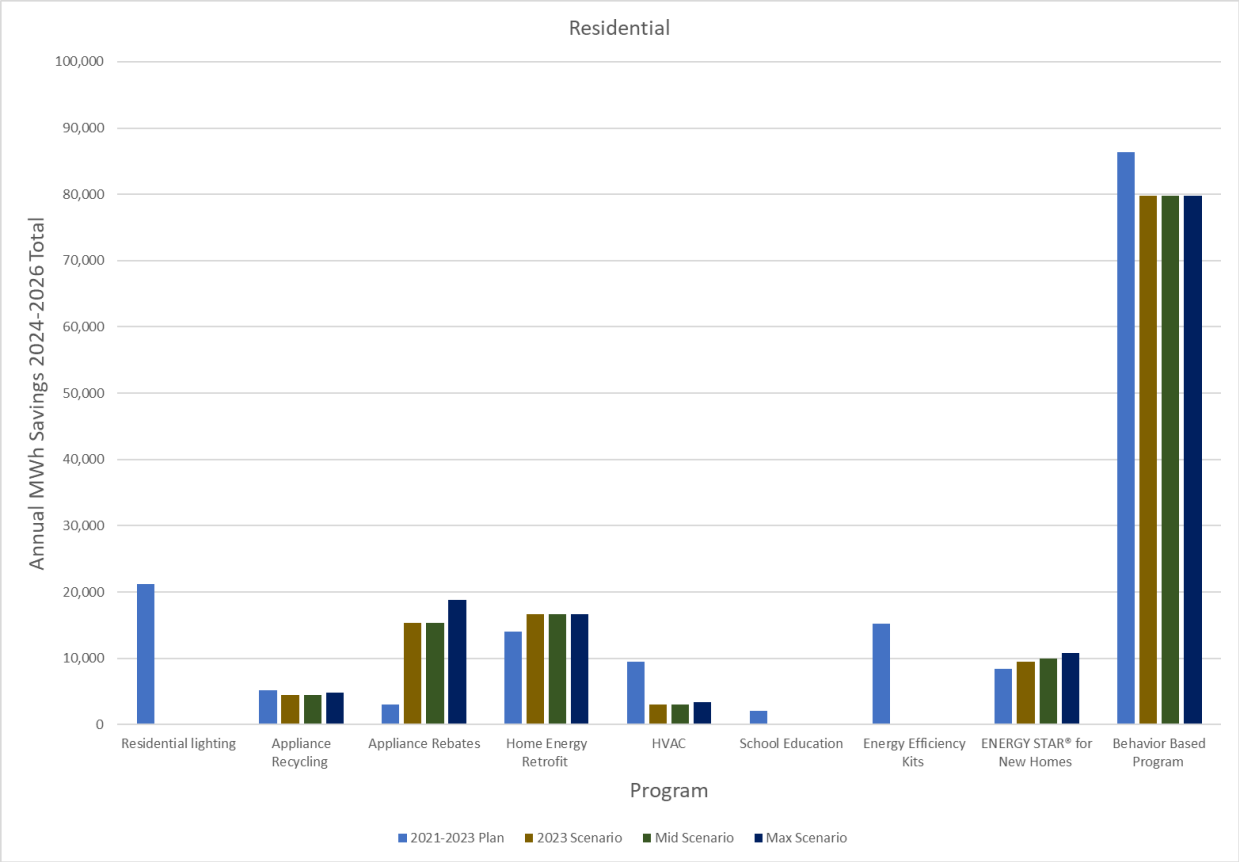
Figure 17: BGE Residential Program Net Savings[41]



MEEA recognizes that the growth in programs such as Quick Home Energy Checkup ("QHEC") and Home Performance require making up for lighting savings that can no longer be counted, however the continued over-reliance on short-lived behavior savings is stark. This is also true for PE as shown in Figure 18, even though it has the lowest percentage of behavioral program savings among the five electric utilities.

[41] *Case No. 9648*, *Baltimore Gas and Electric Company EmPOWER Maryland Program Filing for 2021-2023* ("BGE 2021-23 Plan"), at Table ES-1 Net Savings for 2021-2023 (Sept. 1, 2020), ML# 231706; BGE 2024-26 Plan, Table ES-1 Net 2023 Scenario, Table ES-1 Net Middle Scenario, Table ES-1 Net Maximum Scenario.

Figure 18: PE Residential Program Savings[42]



Some other jurisdictions are taking steps to limit the amount of savings that utilities can report from short-lived behavior programs. Notably in its July 20, 2023 "Order Directing Energy Efficiency and Building Electrification Proposals" the State of New York Public Service Commission ("NYPSC") determined there should be "no funding to "Non-Strategic Measures/Programs" with possible exceptions in LMI portfolios if it can be demonstrated that

[42] *Case No. 9648*, *Potomac Edison Company EmPOWER Maryland Program Filing for 2021-2023* ("PE 2021-23 Plan"), at Table ES-1 Net Savings for 2021-2023 (Sept. 1, 2020), ML# 231681; PE 2024-26 Plan, Table ES-1 Net Revised 2023 Scenario, Table ES-1 Net Revised Middle Scenario, Table ES-1 Net Revised Maximum Scenario.

those measures meaningfully advance energy affordability."[43] The NY PSC defines "non-Strategic Measures/Programs" as follows:

> *"Non-Strategic Measures/Programs" are those that either: 1) jeopardize the advancement of Strategic energy efficiency and/or building electrification programs or measures; 2) increase the use of fossil fuels; 3) have an Effective Useful Life of six years or less; 4) do not promote conservation behaviors and result in use of more energy through increased operation of a measure; or 5) are naturally occurring energy efficiency that results from codes and standards, or through routine market adoption which typically occurs without targeted financing options, rebates, or incentives.*[44]

MEEA respectfully recommends the Commission similarly impose a limit on behavior program savings that would, in effect, require the utilities to increase savings from comprehensive programs with long-lived savings that can reliably position the state to make progress towards its climate goals. Specifically, ***MEEA recommends the Commission direct the utilities to revise their 2024-2026 Plans so that behavior program savings comprise no more than 10% of total portfolio savings.***

C. Utility-Implemented Limited-Income Programs

Several of the utilities propose either new programs intended to directly serve LI customers, or enhanced incentives for LI customers who participate in market-rate programs such as Home Performance with ENERGY STAR.® These proposals include the following:

- Pepco's LMI offering in its Home Performance program;
- Delmarva's LMI offering in its Home Performance program;
- BGE's LMI offering in its Home Performance program;

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[43] New York Pub. Serv. Comm'n ("NYPSC"), Case No. 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Plan*, Order Directing Energy Efficiency and Building Electrification Proposals, at 34 – 35 (July 20, 2023), https://documents.dps.ny.gov/public/common/search.html. (emphasis added).
[44] *Id.* at 35 (emphasis added).

- Pepco's Efficiency for Affordable Housing Program;
- Delmarva's Efficiency for Affordable Housing Program;
- BGE's Multifamily Program.

Regarding the LMI Home Performance offerings, Pepco says the "program will include a new LMI offering with higher incentives compared to the standard incentive structure and targeted towards moderate-income customers."[45] Delmarva's Plan includes the same statement. It is not apparent how either utility will determine eligibility for the proposed higher incentives or what the specific criteria will be.[46] BGE states that "[k]nown low-income customers will be referred to DHCD, this program is targeted at moderate income customers and not meant to compete with DHCD programming"[47] and further states that the program will target "LMI customers through income qualification or through census data or other analysis to identify regions in the service territory with high proportions of LMI customers."[48]

MEEA recognizes and appreciates the intent of the proposed program enhancements to reach more customers with greater support for comprehensive energy efficiency. MEEA is, however, concerned that targeting the programs to LMI communities and customers risks diverting customers who would qualify for DHCD's programs towards the utility programs. Regardless of the utilities' good intentions this sets up a potential for competition with DHCD and could cause some customers who could be better served by DHCD to instead apply for the utility programs. If a customer initially pursues a utility LMI Home Performance project it is conceivable that the customer could be informed and switched to the DHCD program, but there

[45] Pepco 2024-26 Plan at 22.
[46] Delmarva 2024-26 Plan at 22.
[47] BGE 2024-26 Plan at 31.
[48] *Id.*

are likely to be structural disincentives for Home Performance contractors to make such a recommendation once they have already engaged with the customer. In effect, the contractor would be losing a job after making an initial investment in getting it – and the program cannot reasonably expect contractors to work against their own business interest by referring such jobs to DHCD.

MEEA supports enhanced Home Performance incentives that are clearly and strategically made available to moderate income customers. Approval of any such program proposal should include requirements for the utility programs to actively refer customers to DHCD when they are likely to qualify for those programs. Even better would be a referral reward mechanism that would ensure that a contractor who was engaged by a customer through the Home Performance program would not "lose the job" by referring that customer to DHCD. A mechanism that makes that contractor whole for costs incurred could encourage appropriate referrals. Another solution would be for programs to support contractors who are eligible to do both Home Performance and DHCD projects – so that the same Home Performance contractor could still do the job, and bill the costs to DHCD instead of to the Home Performance program. Importantly, the programs must be designed to encourage the best solutions for participating customers and to eliminate any potential for competition between utility programs and those implemented by DHCD. ***MEEA suggests that any approval should be conditional, contingent on the utility first filing a program implementation plan that addresses how the program will ensure that income-qualified customers are referred to, rather than diverted from DHCD programs***.

While MEEA similarly appreciates the intent of Pepco and Delmarva's Affordable Housing Programs and BGE's Multifamily Program, it finds these programs as proposed to be insufficiently characterized. Regarding its Multifamily Program, BGE states that "[p]artnership

and ongoing coordination with DHCD will be key to success"[49] yet it is not at all clear that the proposed program has DHCD's support. In response to discovery from MEEA, BGE stated that it "significantly modified its proposed Multi-Family Program to address the specific concerns and feedback received during conversations with DHCD,"[50] however that seems to be a far cry from the "partnership and ongoing coordination" that BGE calls the key to success.

Pepco states that it "plans to introduce the [Efficiency for Affordable Housing] EAH Program, which is an extension of an already highly successful Delmarva Power and Light Program, to its Pepco service territory. Delmarva Power's EAH Program, originally funded by the Exelon merger settlement, serves multifamily buildings with energy efficiency retrofits. One of the drivers of success for this program is the Company's coordination with the Maryland Department of Housing and Community Development's (DHCD) Multifamily Energy Efficiency and Housing Affordability Program (MEEHA)."[51] However it does not make sense to MEEA that expanding the EAH program to use EmPOWER funds would add benefits for Pepco's and Delmarva's customers. The merger-funded EAH program leveraged a different funding stream to enhance multifamily projects in Delmarva territory, but the proposed expansions suggest that the same benefit would be achieved by leveraging EmPOWER funds with more EmPOWER funds.[52] This makes no sense. It is not leveraging to simply apply more funds from the same source to a project.

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[49] *Id.* at 45.
[50] Baltimore Gas & Elec. Response ("BGE Response") to MEEA Data Request 2-08(c) (attached as Appendix B at 7–8 of 14).
[51] Pepco 2024-26 Plan at 33.
[52] The fact that DHCD administers LI programs does not change the fact that they are funded through EmPOWER.

MEEA suggests that these proposed utility multifamily programs, while intended to be beneficial, are more likely to increase market confusion and impede DHCD's own program expansion efforts. They will also complicate reporting and savings attribution. If more funding will support more multifamily participation, that funding should be channeled to DHCD's programming rather than to a parallel utility program.

Indeed, in its Plan DHCD states that it

> *…is playing the central role in Maryland to connect limited income households with the necessary resources for comprehensive rehabilitation to create livable, green, and healthy homes. DHCD has the expertise and infrastructure to provide upgrades inside of inhabited homes, and the connections with outside parties to provide a complete package of services. Within DHCD, the Housing and Building Energy Programs and the housing rehabilitation division (a section of the SLP division) have been brought together under the leadership of one Director to advance the integration of rehabilitation and energy work. Current developments include increased client referrals, data sharing, cross-promotion, application integration, shared inspections, and work scope coordination. The vision for full integration in the future includes a combined infrastructure with one and the same client services and intake team, one central application, comprehensive building assessments and work scope generation, and one project management system from finish to end.*[53]

MEEA supports the vision laid out here by DHCD and is concerned that the LMI multifamily programs proposed by BGE, Pepco, and Delmarva would undermine its achievement. ***Therefore, MEEA recommends the Commission reject these proposals by the utilities. MEEA is open to reconsidering support for utility multifamily programs that would be available only for properties that do not meet DHCD's eligibility criteria.***

D. Residential New Construction

MEEA supports and appreciates that each of the five electric utilities proposes to continue to support the construction of efficient new homes built in its service territory. Ensuring

[53] DHCD 2024-26 Plan at 12.

that new homes are built to high efficiency standards has long been viewed as an effective use of program funding because a home that is built efficiently will not require more challenging and expensive energy efficiency retrofits down the road. Consistent with this philosophy, as the importance of decarbonizing buildings takes center stage in the pursuit of Maryland's climate goals it makes absolutely no sense for EmPOWER to continue incentive support for the construction of new homes that use natural gas for any end uses. Unfortunately, in the same Plans in which the utilities propose incentive programs to encourage customers to electrify existing gas end uses, they also propose to continue incentives for efficient new homes that use gas. This is exactly akin to proposing programs to provide energy efficiency retrofits for new homes that were not built to efficient standards instead of promoting efficient new construction in the first place.

Pepco, for example, responded to discovery from MEEA by stating that "homes using gas appliances will be eligible, however, there are increased incentives for all-electric tiers of participants such as the ENERGY STAR Next Gen certification as well as bonuses for high efficiency air source heat pumps and heat pump water heaters."[54] BGE states in response to discovery that "[t]he Residential New Construction Program plan does not directly incentivize gas appliances for residential new construction. All appliance incentives offered for new construction are limited to efficient electric equipment only."[55] Unfortunately this misses the point that whether or not BGE provides incentives for specific gas appliances, it proposes to

[54] Potomac Elec. Power Co. Response ("Pepco Response") to MEEA Data Request 2-6(b) (attached as Appendix C at 2 of 3).
[55] BGE Response to MEEA Data Request 2-1(e) (attached as Appendix B at 2 of 14).

continue to provide whole-home incentives for homes that use gas, which effectively means it is providing incentives for gas.

This contradicts the Maryland Commission on Climate Change's ("MCCC") finding that:

> *[s]tudies including E3's Maryland Buildings Decarbonization Study and RMI's The New Economics of Electrifying Buildings add to a body of work demonstrating that all-electric new homes have lower construction and energy costs than mixed-fuel homes. This means that all-electric new homes help improve housing affordability and local air quality while reducing greenhouse gas emissions in Maryland."*[56]

The very first "core recommendation" of the Building Energy Transition Plan is "Adopt an All-Electric Construction Code." [57] In the same way that residential new construction efficiency programs can improve building efficiency practices in advance of enactment of more stringent energy codes, an all-electric requirement for the EmPOWER residential new construction programs will prepare builders and homebuyers for an all-electric building code – a code that MCCC first recommended in 2021.

Maryland would not be the first jurisdiction to preclude efficiency incentives for homes that use gas. In its Decision in Public Service Company of Colorado's ("PSCo") recent Strategic Issues proceeding, the Colorado Public Utilities Commission ("Colorado PUC") found that,

> *All-electric new homes avoid costly gas and utility hookup charges, internal and external gas pipe costs, and gas fixed charges on bills…since the record in this proceeding clearly indicates that new construction represents the "low hanging fruit" for electrification, with customers facing considerable costs to electrify at a later date, it makes little sense to continue incentivizing programs with gas-fired space or water heating equipment in new construction. We also recognize that there may be housing developments underway that reasonably expected to participate in the [ENERGY STAR New Homes] ESNH program,*

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[56] MCCC, *2021 Annual Report, Appendix A: Building Energy Transition Plan*, at 19 (Nov. 2021) ("MCCC Building Plan"), https://mde.maryland.gov/programs/air/ClimateChange/MCCC/Documents/2021%20Annual%20Report%20Appendices%20FINAL.pdf.

[57] *Id.*

> *and that a one-year phase-out is appropriate. Accordingly, we require that the ESNH program support only all-electric housing by June 30, 2024.*[58]

Similarly, the Connecticut Department of Energy and Environmental Protection approved the Connecticut utilities' 2022-2024 Conservation and Load Management Plan with the condition that "[t]he Utilities are directed to develop a proposal for transitioning the Residential New Construction program into an all-electric offering that will begin accepting projects no later than July 2023."[59]

MEEA asked BGE and WGL for information regarding recent new home construction in their service territories. Specifically, MEEA inquired as to the number of new homes connecting to the gas system that required only a service connection compared with those that required more costly construction of new gas main to serve them. Clearly, costs are greater when gas main construction is required, such as when an entirely new neighborhood is being developed or when new gas connections are brought to an existing neighborhood that did not previously have access to gas. New main construction impacts the relative total construction costs of a gas home compared with an all-electric home, regardless of whether those construction costs are shared across the customer base or borne by the developer or home buyer. For both BGE and WGL, between 2018-2021 on average nearly 90% of new residential gas customers connecting to the gas system required new main construction, as shown in Table 5:

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[58] Pub. Utils. Comm'n of Colorado ("Colorado PUC"), Proceeding No. 22A-0309EG, Decision No. C23-0413 *Commission Decision Granting Application With Modifications, Requiring Filings, And Issuing Certain Directives To Guide Next DSM Plan Filing*, at 90, 92-3 (June 22, 2023), https://www.dora.state.co.us/pls/efi/EFI_Search_UI.Show_Decision?p_session_id=&p_dec=30107.

[59] Connecticut Dep't of Energy & Envtl. Protect. ("Connecticut DOE") Final Determination: Approval with Conditions of the 2022 – 2024 Conservation and Load Management Plan, *DEEP Determination: 2022-2024 Conservation and Load Management Plan, Attachment A: Schedule of Conditions of Approval* (June 2, 2022), https://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/92c11f8776277ac0852588550070059b/$FILE/Attachment%20A%20-%20Schedule%20of%202022-2024%20Conditions%20of%20Approval.pdf/.

Table 5: BGE & WGL Maryland Installed Residential Gas Meters 2018-2021[60]

	WGL			BGE		
Year	Main Required	Service Only	% Main Required	Main Required	Service Only	% Main Required
2018	4,556	743	86%	4,888	719	87%
2019	5,020	563	90%	5,141	724	88%
2020	4,916	517	90%	5,122	599	90%
2021	5,373	759	88%	5,205	438	92%
2018-2021	19,865	2,582	88%	20,356	2,480	89%

The predominance of new main construction suggests that homes that are newly connecting to the gas system are incurring costs to do so that would not be required for all-electric homes, and are expanding the gas system in the process – exactly the opposite of what needs to happen to make progress towards the State's climate goals. Prohibiting utilities from incentivizing gas in new construction is fully consistent with the intent underlying Maryland's climate laws. ***MEEA recommends the Commission direct the utilities to limit incentives in their residential new construction programs only to homes that include no fossil fuel end uses or natural gas hookups***. This would be consistent with the MCCC finding that all-electric new homes are more affordable and that they reduce GHG emissions.

E. Continued Promotion of Central Air Conditioners

Prior to the significant technological advances in air source heat pumps, EmPOWER utilities and many other program administrators promoted the purchase and installation of efficient central air conditioners ("CAC") when customers needed to replace an aging cooling system. This made sense at that time – but with the advent of far more efficient heat pump technologies, and vastly improved heat pump performance at colder temperatures it now makes

[60] Washington Gas Light Co. Response ("WGL Response") to MEEA Data Request 2-1(a) (attached as Appendix D at 2 of 3); BGE Response to MEEA Data Request 3-1 (attached as Appendix B at 10–11 of 14).

sense for many customers to install a heat pump instead of a central air conditioner the next time their existing CAC needs to be replaced. Installing a heat pump that can meet all, or even most of a home's winter heating needs in addition to providing its summer cooling will have a far greater impact in reducing Greenhouse Gas ("GHG") emissions than only replacing an aging cooling system with a replacement CAC. Continued CAC replacements will support continued reliance on fossil heating systems because, once a new CAC is installed customers will have no incentive to retire a functioning gas heating system thus impeding future electrification efforts. For this reason, ***MEEA recommends the Commission direct utilities to prioritize heat pump promotion over CAC replacements, and to phase out CAC incentives entirely by a date certain, proposed here to be January 1, 2025.***

VI. NATURAL GAS ENERGY EFFICIENCY

Programs that promote more efficient use of natural gas take two forms in the EmPOWER portfolio: those programs that reduce consumption of gas by existing appliances through improved building efficiency and operations; and those that promote the installation of new gas combustion equipment that is incrementally more efficient than the baseline equipment that is available on the market. MEEA supports only the former type of programs – those that promote improved building efficiency and operations. Included in such programs are not only some of the gas efficiency programs proposed by WGL, but also programs such as Home Performance that are co-implemented with the electric utilities, reducing the waste of both electricity and gas, often through the same measures.

MEEA urges the Commission to reject WGL's proposed programs that promote the installation of new gas combustion equipment, consistent with recommendations it has made in previous proceedings:

> *Each new gas appliance installed today locks in continued fossil fuel dependency, creating an additional obstacle to Maryland achieving its climate commitments—commitments designed to reduce statewide greenhouse gas ("GHG") emissions. The Maryland Department of the Environment's ("MDE") Maryland's 2030 Greenhouse Gas Reduction Act ("GGRA") Plan calls for reducing emissions from buildings through energy efficiency and by converting fossil fuel heating systems to electric heat pumps. Similarly, the Maryland Commission on Climate Change ("MDCC") recommends retrofitting 100 % of low-income households by 2030; encouraging fuel-switching through EmPOWER beginning in 2024; targeting 50% of residential heating, ventilation, and air conditioning and water heater sales to be heat pumps by 2025, with 95% by 2030.*[61]

It does not make sense, in MEEA's view, to have the same customers pay a surcharge to support the installation of new gas equipment in their WGL gas bills while also paying a surcharge in their electric bills to replace gas equipment with efficient electric alternatives. It would be simpler, and more fair, to simply support electrification in the first place. While the Commission denied MEEA's Motion because it found that "[t]he GGRA does not require that natural gas no longer be used as a fuel source; therefore, the Commission's removal of natural gas incentives from the EmPOWER program would go beyond the GGRA's requirements,"[62] MEEA respectfully observes that in a similar context in which climate laws provided clear policy direction for a decarbonized energy system without an explicit statutory requirement to end efficiency incentives for gas equipment, the Colorado PUC determined that removal of gas equipment incentives would be consistent with that state's climate goals:

> *The Commission notes that a material portion of customers with gas-fired space heating appliances may already utilize high efficiency units in their homes and businesses, since they have been widely available for at least 15 years, meeting or exceeding the typical life cycle of many residential heating units. The Commission finds it appropriate to assume those customers would likely replace their heating appliances with another high efficiency unit, even*

[61] Case No. 9648, Maryland Energy Efficiency Advocates ("MEEA") Motion to End Energy Efficiency Funding of Gas Appliance Measures, at 1 – 2 (Apr. 25, 2022), ML# 240349.
[62] Order No. 90261, Order on Semi-Annual EmPOWER Reports, at 19 (June 25, 2022) (Order No. 90261), ML# 241115.

without utility incentives. Further, we have a good cause to believe the heat pump market will evolve rapidly over the next several years, including the manufacture, distribution, and installation segments of the market. We similarly expect customer comprehension and comfort with the technology to rapidly improve due to the availability of IRA incentives and other factors facilitating market adoption. Accordingly, the Commission finds it necessary to restrict DSM incentives for high efficiency gas-fired space heating equipment to only customers replacing lower efficiency units for the market rate, retrofit portion of Public Service's DSM activity starting January 1, 2024, and for all incentives for gas heating appliances in this market segment to end by January 1, 2027. Otherwise, we risk incentivizing behavior that would have occurred without incentives and over-counting savings and benefits by assuming lower efficiency units were being removed, even in situations where that is not the case, and no savings were actually caused by the Company's rebate. [63]

The Colorado PUC further ordered that "[w]ith the federal minimum efficiency standards increasing shortly, and widely available alternatives, we find it reasonable to phase-out incentives for gas water heaters in the retrofit market beginning January 1, 2025. [64]

Because it is counter-productive to pursuit of a decarbonized energy system to continue to support the installation of new gas combustion equipment, ***MEEA urges the Commission to reject WGL's request to continue providing incentives for the purchase and installation of gas combustion equipment.***

VII. DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT PLAN

The Department of Housing and Community Development ("DHCD") developed and submitted a 2024-2026 Plan for the EmPOWER Maryland Limited-Income Program ("LI Plan") designed to reduce limited-income electric retail sales by 0.53% in 2024, 0.72% in 2025, and 1% in 2026.[65] These are significantly greater savings levels than have been achieved in previous

[63] Colorado PUC, Proceeding No. 22A-0309EG, Decision No. C23-0413, at 91.
[64] *Id.* at 91–92.
[65] These are the savings requirements established with the passage of H.B. 169, Reg. Sess. (Md. 2023), effective July 1, 2023, ("Energy Performance Targets and Low-Income Housing Law"), https://mgaleg.maryland.gov/2023RS/Chapters_noln/CH_572_hb0169e.pdf; *See* Md. Code, Public Utilities §§ 7-211, 7-211.1, and 7-211.2.

EmPOWER cycles and will bring more savings to many more limited-income households, reducing energy bills and resultant energy burdens, and improving comfort and health and safety for participants. Achieving the targets will require an all-out effort by DHCD and its partners to achieve – and in MEEA's view will only be possible with focused, streamlined, comprehensive program implementation and unequivocally clear messaging directing eligible households to DHCD for "one-stop-shop" services. ***MEEA respectfully recommends the Commission approve DHCD's Plan.***

In order to enable achievement of the statutory savings targets DHCD proposes "procedural modifications to the comprehensive core programs to enable maximumimum efficiency and effectiveness in the delivery of energy efficiency services."[66] MEEA supports approval of the proposed modifications and respectfully offers several specific recommendations for consideration in DHCD's LI Plan.

A. Workforce Development

DHCD states that it is "undertaking an increased effort to promote energy jobs and provide the necessary resources to train Network Partner staff…concluding its procurement for a dedicated training provider with a training center in Maryland to expand the learning opportunities for field staff." [67] MEEA asked DHCD what it believes "are the greatest risks to its success in meeting the 2024-2026 Plan targets" to which it replied, "staffing and workforce availability."[68] DHCD states in the LI Plan that it is "seeking to nearly double the number of Network Partners available to perform work for this program from 18 to 30."[69] MEEA urges the

[66] DHCD 2024-26 Plan at 7.
[67] *Id.* at 11–12.
[68] DHCD Response to MEEA Data Request 2-12(a) (attached as Appendix A at 1 of 2).
[69] DHCD 2024-26 Plan at 56.

Commission to approve proposed investments in workforce development to ensure that qualified staff are available to carry out the projects required for success of the LI Plan.

B. One-Stop Shop

DHCD comments that it "is playing the central role in Maryland to connect limited income households with the necessary resources for comprehensive rehabilitation to create livable, green, and healthy homes." [70] Creating, and then building on the clarity that comes when Marylanders know that these services for household with limited incomes will enhance ease participation for disadvantaged households and improve DHCD's ability to meet its targets. MEEA encourages the Commission to clarify that any utility programs should not undercut the creation of DHCD's one-stop shop by targeting the same limited-income market that DHCD is designated by statute to serve. DHCD notes that it is "committed to alleviating barriers to participation in the programs and has been working with the LI Workgroup to identify solutions, including:

- Increase communication and regular follow-up with pending applicants and client referrals
- Use automation and contractors to alleviate workload of follow-ups
- Provide more language options in applications
- Streamline application process and build up capacity to handle volume without delays
- Centralize all program information, including rehab programs
- Build up client call center / customer service capacity
- Provide sales and customer service training opportunities to Network Partners

[70] *Id.* at 12.

All of these activities to improve customer experience are critical for reaching the much-increased participation targets needed to meet the savings goals.

C. Funding for Gas Appliances

DHCD "plans to reduce the funding of gas appliance replacements to conserve funds that do not contribute to the electric savings target."[71] In light of the need to promote building electrification, and to ensure that limited-income households are not excluded from participating in the clean energy transition, MEEA supports DHCD's recommendation to prioritize use of gas funds for building shell improvements and forced air system tune-ups and appreciates its proposal to "record the households that contain unreplaced gas appliances, pre-assess for electrification potential, and electrify these households in the future when electrification becomes supported by program targets, or refer them to electrification programs." [72] However, when DHCD determines it is necessary to replace a CAC and an accompanying gas furnace, MEEA recommends that wherever possible it attempt to install a heat pump instead of the air conditioner to reduce households' future reliance on gas. In particular, MEEA also recommends DHCD assess the potential for heat pump installations to eliminate gas appliance related health and safety issues. For example, DHCD should consider whether a heat pump sized to meet a home's heating load could replace a furnace with a cracked heat exchanger.

D. Categorical Eligibility

DHCD proposes a modification so that "[i]ndividual participants located in certain areas that are considered disadvantaged communities can self-attest their income" [73] using the MDE Environmental Justice tool to determine geographic eligibility. MEEA supports this program

[71] *Id.* at 24.
[72] *Id.*
[73] *Id.* at 33.

approach and believes it could be an important tool for increasing program participation. However, MEEA urges DHCD to include in its evaluation plans an assessment of whether this approach leads to any difference in the relative incomes of participants compared with the traditional income verification process. MEEA recommends this to ensure that those households with the lowest incomes are not supplanted by higher income households residing in disadvantaged communities. As a best practice for management, MEEA similarly encourages DHCD to make sure to gather data to test the effectiveness of the various changes it proposes in the LI Plan. For example, where DHCD hypothesizes that issuing funds directly to individual projects will allow "the program to scale up production with minimal administrative burden" [74] it should be sure to gather data once the change is implemented to see if the intended benefit occurs.

E. MEEHA Measure Funding List

DHCD notes that:

> *[h]istorically, the Savings to Investment Ratio (SIR) has been used to determine the funding amount for each energy conservation measure and the project as a whole. Most measures, whether residential or commercial, require the project to share the cost of the measure to meet the SIR requirement. The SIR requirement has resulted in unintended consequences including a high share cost to the owner and some inequity in funding amounts across the State with projects in utility territories with high utility rates receiving more funding for the same measure than projects in utility territories with lower utility rates.*[75]

As a result of these concerns DHCD proposes to "remove the use of the SIR to determine funding amounts for energy conservation measure improvements. Instead, a Measure Funding List will be used to determine funding for each project."[76] MEEA supports this proposal and

[74] *Id.* at 57.
[75] *Id.* at 63.
[76] *Id.*

agrees that it will improve the equitable implementation of MEEHA measures. Relatedly, MEEA supports DHCD's proposal to "remove the 5-year wait period for applicants to re-participate in DHCD's EmPOWER programs."[77] Previous participants who were unable to complete full projects due to SIR limitations may now be able to install more EE measures, and should have the opportunity to do so even if they participated less than five years previously.

F. Qualified Project Managers

DHCD states it "will no longer provide incentives for Qualified Project Managers as the new Hancock Database will perform many of the required actions of a Qualified Project Manager."[78] MEEA urges DHCD to test its assumption that the Qualified Project Manager role will no longer be useful before it ends its support, given its intent is to make participation easier – something that DHCD will need to do even more of given its greatly increased savings goals.

VIII. ELECTRIC UTILITY FRONT-OF-THE-METER PROGRAMS

A. Utility rationale for including front-of-the-meter programs

In comments filed in the Future Programming Work Group process, the joint utilities stated that they "are looking towards the future of EmPOWER Maryland to advance innovative solutions for meeting GHG abatement goals. The Utilities strive to establish a framework that embraces both new and emerging technologies and continues the significant benefits from traditional energy efficiency and demand response programs."[79] The Future Programming Work Group Report discussion of FTM Utility Resources and Non-Energy Resources indicates that "[t]he Utilities proposed that X% of a utility's GHG abatement goal be achieved through a combination of non-energy resources or FTM Utility Resources. FTM Utility Resources could

[77] *Id.* at 30.
[78] *Id.* at 67.
[79] Joint Utility EE-DR-DER-FS Proposal, (attached as Appendix H at 1).

include CVR, high-efficiency transformers, methane gas detection, line loss reduction programs, street and area lighting, electric transportation/EV charging, DER, and renewables." [80] However, what the utilities propose for FTM resources in their 2024-2026 Plans is CVR and virtually nothing else. This is illustrated in Table 5, where the non-CVR FTM resources' contribution to total 2024-2026 gross savings in the 2023 Scenario varies between 0.0% for SMECO to 0.7% for Delmarva.

Table 4: FTM Resources % of 2024-2026 Total 2023 Scenario Gross Savings[81]

	BGE	Pepco	Delmarva	PE	SMECO
CVR	19.9%	20.5%	18.6%	12.0%	11.1%
Peak Energy Savings Credit			0.1%		
Dynamic Pricing		0.1%			
Transformers	0.1%	0.2%	0.6%	0.1%	

The Commission has previously considered whether the utilities are appropriately accounting for CVR savings in their EmPOWER Plans and reports, finding at one point that

> *there are various positions on this issue, and notes that several questions remain unanswered since the EUL assessment. For example, it is not clear why BGE has significantly higher operations and management ("O&M") expenses for the CVR Program than Pepco and Delmarva, or whether Exelon Utilities are spending enough and appropriately each year to justify a one-year EUL. It is undisputed, however, that a change in the EUL would significantly impact the 2021-2023 Plans presented by Exelon Utilities, likely resulting in missed savings goals and an increase in EmPOWER program costs to account for the loss of CVR credits. Since other determinations in this Order likely will increase the EmPOWER surcharge, the Commission will not modify the EUL for CVR at this time, in order to avoid a substantial increase to the surcharge.*[82]

[80] Future Programming Work Group Report at 32, ML# 240203.
[81] Percentages calculated from utility Plans Tables ES-1 Gross.
[82] Order No. 89679, Order Authorizing Transition to 2021–2023 Program Cycle at 16-17 (Dec. 18, 2020), ML# 233021.

The potential surcharge impact notwithstanding, MEEA continues to assert that the utilities have no defensible technical basis for continuing to claim savings from CVR towards their ongoing EmPOWER obligations. The Climate Solutions Now Act ("CSNA") requires "each electric company to procure or provide for its electricity customers cost–effective energy efficiency and conservation programs and services with projected and verifiable electricity savings that are designed on a trajectory to achieve a targeted annual incremental gross energy savings."[83] MEEA maintains that CVR savings only meet the definition of "incremental" (increasing or adding on, especially in a regular series[84]) as a result of new voltage regulation equipment being brought into service. However, in response to discovery from MEEA, four of five utilities have confirmed that CVR savings from newly installed equipment will not occur in the 2024-2026 Plan period.[85] For example, Pepco responded that "[a]t this time, all forecasted savings from CVR would be from equipment installed prior to 2024."[86] Similarly, BGE answered that "Almost all reported savings for CVR is attributable to capacitor bank controllers and regulator controllers installed prior to the start of the 2024-2026 cycle."[87] Thus the CVR savings are not incremental – they are a continuation of savings from previously installed measures.

The utilities have argued that:

> *[t]he treatment of CVR is no different than the accepted one-year measure life for the behavior programs. Unlike the behavior programs, the CVR program costs are recovered through distribution base rates so issues of cost recovery (amortization vs. expense for EmPOWER programs) do not arise for the CVR*

[83] CSNA at 71.
[84] https://www.dictionary.com/browse/incremental.
[85] MEEA did not propound discovery questions on CVR on PE in time for it to respond prior to the comment filing deadline.
[86] Pepco Response to MEEA Data Request No. 2-8(c) (attached as Appendix C at 3 of 3).
[87] BGE response to MEEA Data Request 2-2(a) (attached as Appendix B at 3 of 14).

> *program. The similarity between the behavior program and the CVR effort is that, in both cases, the utilities must actively act each year to achieve the energy savings. The utilities devote resources and incur costs in this important effort. Utilities must devote resources year-to-year to achieve the annual savings produced by the CVR program. Expenses include ongoing monitoring of the program, software upgrades, equipment maintenance and repair and new capital investments in order to continue to achieve the CVR energy savings.*[88]

However, as noted above the utilities have indicated that they anticipate no capital costs for CVR during the 2024-2026 Plan period. Further, in response to discovery from MEEA, Pepco responded that "because the costs associated with CVR are minimal, Pepco does not have specific accounting details of costs associated with CVR separately broken out in its current MYP." [89] BGE did provide a listing of numerous costs related to operation of its CVR system, including two FTEs at a cost of $250,000 annually, "CVR Field Device Corrective Maintenance Costs" at roughly $800,000 annually, and "OSI Annual CVR Maintenance Costs" for 2017-2021 ranging from $265,000 to over $400,000 per year through that period.[90] However this is in sharp contrast to the response it provided to Sierra Club in Case No. 9692, where it stated that in the MYP other than the approximately $4 million in capital costs for CVR "there are no other projected costs associated with Conservation Voltage Reduction from 2024-2026."[91]

Perhaps more importantly, BGE, Pepco, Delmarva, and SMECO have all confirmed in response to discovery from MEEA that they will continue to implement CVR regardless of the

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[88] *Case No. 9648*, Exelon Utilities Joint Filing on the Estimated Useful Life for the Conservation Voltage Reduction ("CVR") Program Report, at 2 (Oct. 15, 2020), ML# 232191.
[89] Pepco Response to MEEA Data Request No. 2-8(a) (attached as Appendix C at 3 of 3).
[90] BGE Response to MEEA Data Request 4-1(a) (attached as Appendix B at 12–13 of 14).
[91] *Case No. 9692*, *Baltimore Gas and Electric Company's Application for an Electric and Gas Multi-Year Plan*, BGE Response to Sierra Club Data Request ("SCDR") 6-10(b) (June 20, 2023), ML# 303593.

amount of CVR approved for the Company to report towards its EmPOWER goals.[92] This, of course, is as it should be – after all, the customers of these utilities have paid millions of dollars for this equipment to be installed.

Regarding CVR in its comments on the 2021-2023 EmPOWER program plans MEEA stated that

> *[t]he reason this matters, and the reason that MEEA persists in calling the Commission's attention to this matter, is that the utilities that claim savings for CVR that was put into operation in prior years are, in effect, depriving their customers of the energy efficiency benefits that the EmPOWER Act requires them to provide…[a]s it has since these discussions commenced, MEEA supports utility CVR and recognizes that it provides value to utility customers—but it should not be used to avoid the provision of additional savings as required by the EmPOWER statute.*[93]

Nothing has changed in the current filings to suggest that CVR savings can reasonably be attributed towards the obligations the utilities must meet to comply with the CSNA requirements. ***Recognizing the implications of such a decision, MEEA respectfully continues to recommend that CVR savings should not be approved in these Plans and that the utilities should be required to revise their plans to meet their obligations without CVR.*** To the extent the utilities believe there are bona fide FTM resources to pursue other than CVR MEEA hopes they will develop those proposals in their revised Plans.

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[92] Pepco Response to MEEA Data Request 2-8(d) (attached as Appendix C at 3 of 3); BGE Response to MEEA Data Request 2-4(a) (attached as Appendix B at 4 of 14); Delmarva Power & Light Co. Response ("Delmarva Response") to MEEA Data Request 2-2 (attached as Appendix E at 1 of 2); Southern Maryland Electric Coop. Inc. Response ("SMECO Response") to MEEA Data Request 2-3(f) (attached as Appendix F at 2 of 2). MEEA did not propound discovery questions on CVR on PE in time for it to respond prior to the comment filing deadline.

[93] *Case No. 9648*, MEEA Comments on the EmPOWER Maryland 2021-2023 Program Plans, at 34-35 (Oct. 15, 2020), ML# 232197.

IX. ELECTRIC UTILITY ELECTRIFICATION PROGRAMS

Throughout the FPWG process MEEA has recognized that EmPOWER presents a unique vehicle for promoting building electrification for utility customers. In comments to the Commission regarding the FPWG report – Phase II MEEA stated that it:

> *includes the assumption that electrification of fossil-fuel technologies will be an important contributor to EmPOWER savings in the coming years and recommends the Commission provide explicit direction to the utilities to implement electrification initiatives. As noted above, electrification is a key strategy of the MCCC 2020 Annual Report for achieving the State's climate objectives, stating that Maryland "should set a goal of 50 percent of space heater sales to be electric heat pumps (air source or ground source) by 2025." Electrification will undoubtedly be a critical component of the forthcoming MDE plans for complying with the ambitious CSNA GHG emissions reduction targets. MEEA included [in its goals recommendation] above a ramp up to the "Maximum Achievable" electrification savings from the MPS, acknowledging that meeting the ramp up would require a concerted effort on the utilities' part—and that it would still accomplish significantly less than will likely be called for in the MDE plans for meeting the CSNA requirements.*[94]

While each of the electric utilities provided electrification proposals in the Middle and Maximum scenarios, MEEA finds the cost and savings proposals to be almost extraordinarily different across the different utilities, with no apparent basis provided in the Plans to understand why this would be the case. Further, BGE did not include any cost projections for the electrification programs it proposed, instead initially recommending that "the Commission mitigate ratepayer impacts associated with the electrification program by recovering costs through base rates, as proposed by BGE in Case No. 9692."[95]

Pepco similarly proposed electrification programs and budgets in its multi-year plan, and states in its EmPOWER Plan that "the Middle Scenario includes the programs from the 2023

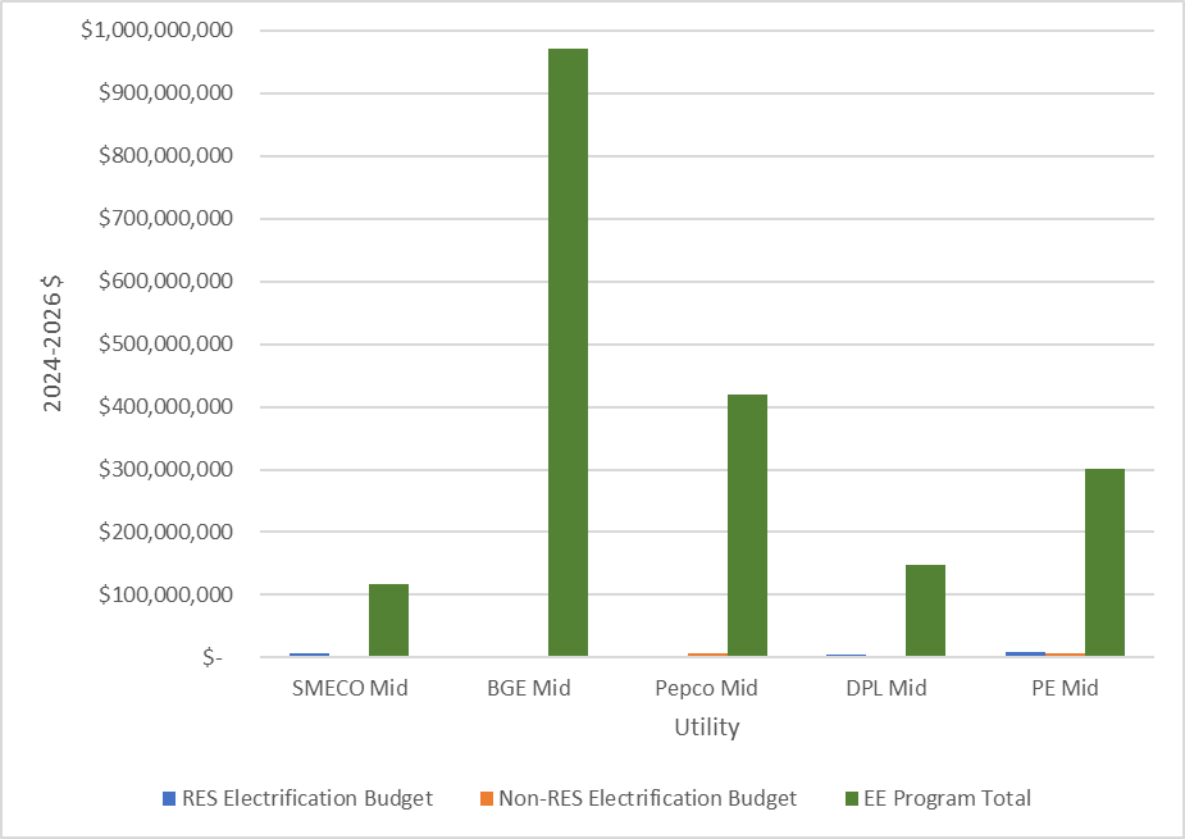
[94] *Case No. 9648*, MEEA Comments on EmPOWER Maryland Future Programming Work Group Report – Phase II, at 7 (Jan. 27, 2023), ML# 301061.
[95] BGE 2024-26 Plan at 3.

Scenario, appliance electrification, and commercial electrification, as well as all the programs within the Beneficial Electrification Program proposed within Case No. 9702, which is Pepco's Multi-Year Plan."[96] Pepco explains in a footnote that " [t]he $492.1M [budget for the Middle Scenario] includes $54M for Pepco's Beneficial Electrification Program proposed in its Multi-Year Plan and $8M for the electrification measures included in the Middle and Maximum scenarios that are not proposed in Pepco's Multi-Year Plan."[97] However, the Executive Summary tables in Pepco's filing for the Middle Scenario include only approximately $8 million for electrification, and thus it is entirely unclear what programs Pepco is actually proposing in this proceeding.

If one looks only at the costs as represented in the ES tables in the utilities' filings, which provide the only reference in the record of this proceeding, the electrification cost proposals are across-the-board only a small fraction of overall program costs, as illustrated in Figure 19:

[96] Pepco 2024-26 Plan at 6
[97] *Id.* at 3.

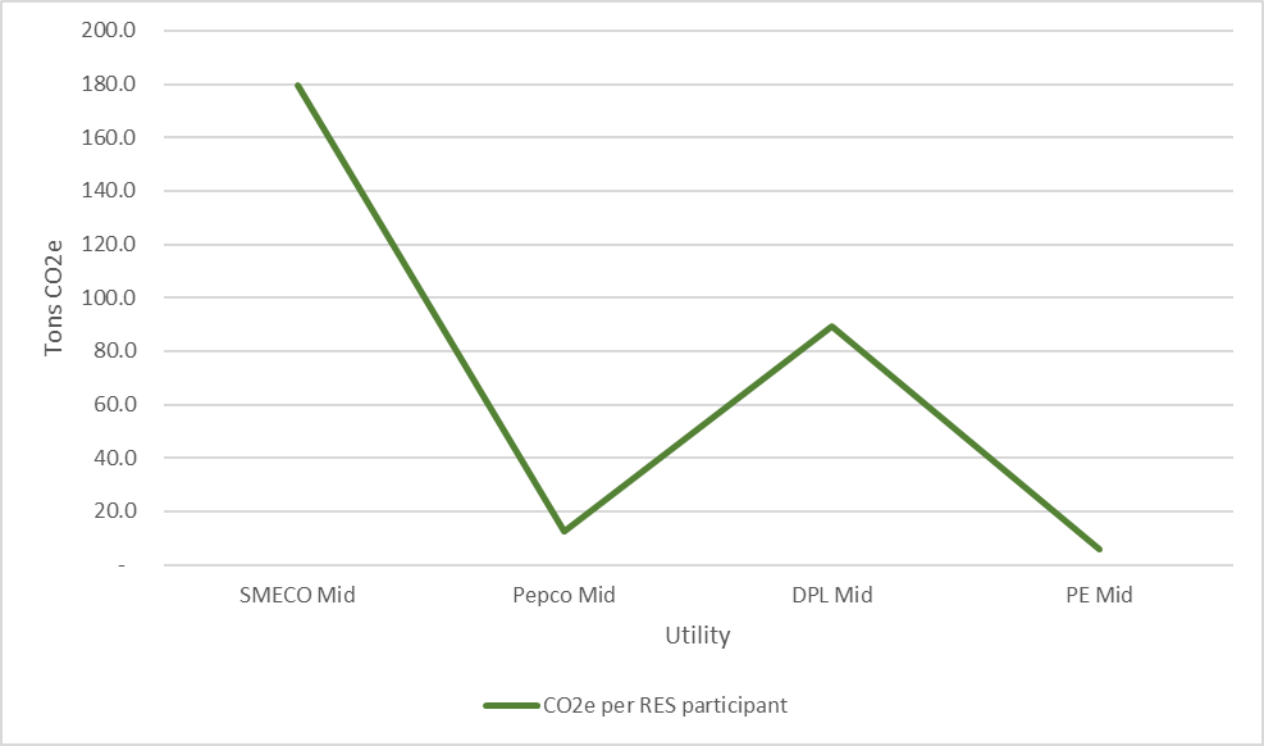
Figure 19: Electrification Budgets vs. Energy Efficiency Budgets[98]



The expected GHG abatement per participant is also remarkably different across the utilities, as shown for residential electrification programs in Figure 20:

[98] Budgets from utility Plans Table ES-3D Middle Scenario.

Figure 20: Metric Tons Carbon Dioxide Equivalent ("CO^2e") per participant, Residential Electrification[99]



Pepco states that electrification in the Middle Scenarios "will target smaller residential fossil fuel appliance replacements such as electric ranges and cooktops, clothes dryers, lawn equipment, and fireplaces"[100] and that in the Maximum Scenario "Pepco will offer higher incentives for strategic measures (e.g., heat pump water heaters, smart thermostats, and clothes washers) as well as measures through the marketplace and POS delivery channels" – but, without explanation, the CO2e per participant are identical in both scenarios.[101] PE states that the Middle Scenario "builds upon the 2023 Scenario with addition of electrification offerings, primarily rebates for customer electrification of heating and water heating and addition of electrification

[99] CO^2e reductions and participants from utility Plans Table ES-1 Net Middle Scenarios
[100] Pepco 2024-26 Plan at 20.
[101] *Id.* at Tables ES-1 Net Middle and ES-1 Net Maximum.

incentives to EE projects"[102] but as shown in Figure 20 it expects even less CO2e per participant that Pepco. On the surface this makes no sense, yet no explanations are provided.

As noted above, MEEA has advocated for inclusion of electrification programs in EmPOWER and will continue to do so. Electrification, and the resultant reduced use of fossil fuels will be a critically important part of the State's climate preservation strategy. It is also critical for utilities' electrification incentives to be consistent with and complementary to the federal Inflation Reduction Act ("IRA") rebates and tax credits that will soon be present in the state.

MEEA finds that the proposals presented by the utilities are sufficiently vague and incomparable to each other that there is no basis for supporting them as filed. Rather, ***MEEA recommends the Commission direct the utilities to jointly design building electrification programs that provide equivalent benefits and opportunities at consistent costs across all five electric EmPOWER service territories, and to include them in updated 2024-2026 EmPOWER Plans to be filed no later than August 1, 2024. The Plans should include electrification of heat and hot water end uses, as well as electrification of other residential and commercial appliances, and an explanation of how the utility electrification programs would be coordinated with IRA funds.***

Additionally, MEEA recommends the Commission establish provisions for the creation of uniform, state-wide electrification programs that would be either fully delivered by an entity other than the utilities, or, at a minimum, would ensure that utility-delivery of such programs is uniform and consistent throughout the state so that all customers would have access to equivalent

[102] PE 2024-26 Plan at 11.

electrification opportunities regardless of which utility provides their electricity. MEEA strongly supports a third-party electrification approach, but the absence of a state-wide electrification program should not be a cause for significantly delaying electrification through the EmPOWER program in the meantime.

MEEA recommends the Commission direct the utilities to work with stakeholders including Commission Staff, the Office of People's Counsel, the Maryland Energy Administration, the Maryland Department of the Environment, DHCD, MEEA, and other parties to jointly design fully fleshed out building electrification programs that provide equivalent benefits and opportunities at consistent costs across all five electric EmPOWER service territories. MEEA strongly recommends the following parameters be reflected in this process:

1. Electrification program development should be facilitated by an independent, skilled professional consultant. In addition to facilitation, the consultant should be responsible for providing and documenting research on emerging best practices from other jurisdictions, and should be responsible for documenting a program plan to be filed with the Commission;

2. Electrification program development should be carried out using "project management" with clearly delineated decision-making processes that avoid stalled progress when opinions diverge, as well as clear responsibilities, deliverables, and deadlines such that fully fleshed out electrification program plans, which are comparable in per-customer cost across utilities, will be filed with the Commission *no later than* August 1, 2024.

3. The Plans should include electrification of heat and hot water end uses, as well as electrification of other residential and commercial appliances, and an explanation of how the utility electrification programs would leverage and be coordinated with IRA funds;

4. The Plans should clearly describe DHCD's primary role in providing electrification programs for LI households that are otherwise eligible for its EmPOWER programs;

5. Availability of electrification program incentives for customers should not be contingent on customers agreeing in any respect to maintain gas service or gas back-ups for electrical appliances.

X. INFLATION REDUCTION ACT

Each of the utilities refers to potential leveraging of tax credits and incentives from the Federal Inflation Reduction Act of 2022 ("IRA"). For example, BGE notes that in its program scenarios "the energy efficiency requirements are aligned with the IRA requirements for tax credits and tax deductions for its residential and commercial customers"[103] and that the IRA "will encourage BGE's customers to invest in energy efficiency in their homes and businesses and the company plans to use these funding opportunities to bolster participation in the EmPOWER programs."[104] PE similarly says that "customers will be encouraged to leverage other resources that may be available, such as from programs with funding under the Inflation Reduction Act (IRA)."[105] Pepco says that it "recognizes the important role that this federal funding will play in encouraging and incentivizing customers to invest in energy efficiency and energy savings electrification technologies. The Company envisions that its coordination efforts including alignment and communications throughout implementation, will leverage the IRA opportunities and funding to encourage increased customer participation and program performance."[106]

MEEA appreciates these acknowledgments of the IRA and encourages the Commission to direct the utilities think expansively about how they might support their customers not only in

[103] BGE 2024-26 Plan at pdf p. 25.
[104] *Id.*
[105] PE 2024-26 Plan at 11.
[106] Pepco Plan at 7–8.

receiving IRA rebates when they become available, perhaps not until 2025 for some IRA programs, but also in obtaining tax credits that are already available for eligible investments made in 2023. The utilities can potentially do much more than simply informing customers about IRA opportunities. Some IRA program funding is likely to require documentation of energy savings analysis that could mirror analysis that is done in EmPOWER, such as for Home Performance programs. The technical and documentation requirements of participating in IRA programs could be challenging for households and small businesses and EmPOWER programs should seek to support customers in these areas, which would reasonably allow them to claim attribution for savings towards their program goals.

DHCD does not directly refer to the IRA in its Plan, though it notes that stakeholders raised the importance of IRA coordination in workshops and stresses its strong working relationship with the Maryland Energy Administration ("MEA"), which is charged with developing the IRA programs that will target rebates for LMI households to install energy efficiency and electrification measures. While not stated explicitly in its Plan, it is MEEA's understanding that DHCD intends to maximize the coordination of IRA funds for its program participants, which would be consistent with House Bill 169 which directs that "the Department, the Maryland Energy Administration, and other state agencies shall apply for all federal funding that may become available to carry out this section." [107]

XI. UTILITY PERFORMANCE INCENTIVE MECHANISM PROPOSALS

Conceptually, MEEA supports the establishment of a performance incentive mechanism

[107] Energy Performance Targets and Low-Income Housing Law, H.B. 169, (Md. 2023), https://mgaleg.maryland.gov/2023RS/Chapters_noln/CH_572_hb0169e.pdf; *See also* Md. Code Public Utilities, § 7-211.1 (H)(2)(I).

("PIM") to encourage performance above statutory goals. Research from the American Council for an Energy Efficient Economy ("ACEEE") concluded that "performance incentives are working in combination with other supportive regulatory policies to encourage effective energy efficiency program performance"[108] in the jurisdictions they reviewed that have them in place. Pepco, Delmarva, BGE, and PE all included specific proposals for a performance incentive mechanism (PIM) in their Plans, in which they would earn a reward for achievement of their EmPOWER goals. SMECO, as a non-profit, customer-owned electric cooperative is not seeking to establish a PIM. WGL provided proposed principles for a PIM but is not proposing a specific PIM at this time.[109]

BGE, Pepco, and Delmarva all propose a PIM under which they would earn a reward of 5% of net benefits for meeting at least 95% of their goal and 10% of net benefits for achieving at least 100% of goal, provided they do not invest more than their approved budgets. If they exceed the budget their incentive is cut to half of what it would otherwise be.[110] PE proposes that it earn 5% for achievement between 85% and 95%, 10% of net benefits for achievement between 95% to 105%, and 15% of net benefits for achieving greater than 105% of goal, with the incentive capped at 10% of the annual budget.[111] MEEA requested the utilities to provide estimates of the PI they would receive for achieving 100% of goal in each of the three scenarios and finds that the variation in responses suggest the utility proposals are not sufficiently developed to support approval at this time.

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[108] Seth Nowak, et al., *Beyond Carrots for Utilities: A National Review of Performance Incentives for Energy Efficiency*, The American Council for an Energy Efficient Economy, Report U1504 (2015), https://www.aceee.org/research-report/u1504.
[109] WGL Response to MEEA Data Request 2-3(a) (attached as Appendix D at 3 of 3).
[110] BGE 2024-26 Plan at 7–8; Pepco 2024-26 Plan at 17; Delmarva 2024-26 Plan at 16.
[111] PE 2024-26 Plan at 36–37.

As illustrated in Table 6, it appears that the relative earnings of the different utilities would be vastly different as a percentage of annual budget, ranging from 2.9% of budget for PE to 21.4% of budget for Pepco.

Table 5: Utility-Calculated PI for 2023 Scenario at 100% of Goal[112]

	2023 Scenario Average Annual Budget for 2024-2026	Utility-calculated PI at 100% of goal	PI % of Annual EE Budget (does not include electrification)
BGE	$ 323,558,585	$ 18,039,433	5.6%
PE	$ 90,492,327	$ 2,634,103	2.9%
Pepco	$ 117,899,168	$ 25,243,628	21.4%
Delmarva	$ 38,097,733	$ 7,290,130	19.1%

What is more, the value of the proposed PIs as a percentage of annual EE budget appears to stay relatively flat or even decrease as savings increase in the middle and maximum scenarios – which seems antithetical to the concept of an incentive to promote greater benefits. MEEA recognizes that its interpretation of the discovery responses from the Companies may misrepresent their intent but finds the range of provided PI values to be so broad as to require more information before approval could be recommended. A PIM has the potential to improve savings performance to the benefit of utility customers, but must be framed thoughtfully, with a clear understanding of what the results will be in a range of scenarios. ***MEEA respectfully***

[112] Utility-calculated PI from Pepco Response to MEEA Data Request No. 2-4 Attachment Electronic Only (attached as Appendix C at 1 of 3); BGE Response MEEA Data Request No. 2-6(c)-(d) (attached as Appendix B at 5–6 of 14); Delmarva Response to MEEA Data Request No. 2-4 Attachment Electronic Only(attached as Appendix E at 2 of 2); The Potomac Edison Co. Response ("PE Response") to MEEA Data Request No. 2-2 Attachment 1 (attached as Appendix G at 2–8 of 8). 2023 Average EE budget, not including electrification, from BGE 2024-26 Plan, at Table ES-3D Gross 2023 Scenario; Delmarva 2024-26 Plan, at Table ES-3D Gross 2023 Scenario; Pepco 2024-26 Plan, at Table ES-3D Gross 2023 Scenario; PE Response to MEEA Data Request 1-1, Attachment 2_Table ES-3D (attached as Appendix G at 1 of 8).

suggests the Commission direct the utilities to develop and submit for consideration a joint PIM proposal that would apply equivalently to each of the utilities, and suggests other interested parties could also submit proposals for consideration. Descriptions and explanations of the proposals, along with any supporting analysis, could be filed in advance of a Commission-sponsored technical conference in which the proposals could be discussed to inform a potential Commission decision regarding PIM approval.

XII. OTHER ISSUES

A. BGE Composting Pilot

BGE states in its Plan that as it "explores new program concepts to support the net-zero and decarbonization goals established by Maryland's Climate Solutions Now Act (CSNA), the Company is looking to pilot a composting program to reduce greenhouse gas emissions related to the collection, transportation, and disposal of organic waste within BGE's service territory."[113] In MEEA's view, the purpose of a pilot program is to test concepts and assumptions that could lead to a more broad scale deployment of a program based on what is learned through the pilot. In response to discovery from MEEA asking what the implications would be for a successful pilot BGE responded that it "BGE would potentially implement a full-scale composting program in future cycles."[114] Given the nature of the pilot as a solid-waste program MEEA inquired whether BGE had discussed the pilot concept with the Maryland Department of Environment, to which it replied "BGE discussed the pilot concept during the EmPOWER Technical Conference on April 28, 2023 in Baltimore. MDE was in attendance and asked a few high-level questions, but we did not document the specific questions or responses." [115]

[113] BGE 2024-26 Plan at 92.
[114] BGE Response to MEEA Data Request 2-9 (attached as Appendix B at 9 of 14).
[115] *Id.* at 2-9(a).

While MEEA appreciates that BGE is "thinking outside the box" it recommends the Commission reject this proposal. Any proposal for an energy utility to move into solid waste management, even on a pilot basis, should be developed or at least fully vetted with MDE prior to its consideration by the Commission. Further, because the costs of the pilot, and especially of a full-scale program, would potentially worsen energy burdens of limited-income households, MEEA recommends such non-energy GHG abatement proposals only be considered after a rate-relief program for limited-income households has been implemented.

Dated: October 16, 2023.

Respectfully submitted,

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On behalf of Maryland Energy Efficiency Advocates

CERTIFICATE OF SERVICE

I hereby certify that on this 16th day of October, 2023, the foregoing was served by e-mail to all known parties of record.

Susan Stevens Miller, Esq.
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On Behalf of the Maryland Energy Efficiency Advocates

APPENDIX A
DHCD DATA RESPONSES

Request No. 12: Given the significantly increased savings targets and associated ramp-up in participation, has DHCD conducted any risk assessment or analyses to identify the factors that could hamper its ability to achieve the required savings? Please provide any such analyses DHCD has conducted.

a. What does DHCD believe are the greatest risks to its success in meeting the 2024-2026 Plan targets?

b. Has DHCD identified any risk mitigation or management strategies that are not included in the 2024-2026 Plan as proposed? Please explain.

DHCD Response to part (a): Staffing and workforce availability.

DHCD Response to part (b): DHCD is prepared to utilize its existing subcontractors or quasi-state agency partners, MES and MCEC, to temporarily fill in any critical staffing gaps. DHCD is already deploying multiple workforce development strategies through its existing funding, such as contractor certification training, subsidies, and contractor engagement events. DHCD applied for additional WAP funding specifically for this purpose, and is collaborating with MEA to coordinate and maximize the use of any incoming federal funds for energy workforce development.

Request No. 13: Please refer to Table 12 on p. 28. Please also refer to Table II-2 on p. 5 of the Maryland Energy Affordability Study Final Report prepared by APPRISE dated December 2022. The two referenced tables appear to include the same numbers of households, but these numbers are not associated with the same utilities in each. For example, in the APPRISE table Pepco is listed as having 127,738 limited income households, whereas the DHCD Plan shows Pepco with only 29,447 limited income households.

a. Please provide a corrected version of Table 12 from DHCD's Plan.

DHCD Response: The correct table is as follows:

Table 12 - Limited-Income Households as a Percentage of All Residential Customers

Utility	Total Households	Limited-Income Households <=250% Federal Poverty Level	
	N	N	%
BGE	1,084,803	297,357	27%
Delmarva	186,940	62,718	34%
PEPCO	535,636	127,738	24%
SMECO	148,066	29,447	20%
PE	248,565	70,509	28%
TOTAL	2,204,011	587,768	27%

APPENDIX B
BGE DATA RESPONSES

Case No. 9705
Baltimore Gas and Electric Company
2024-2026 EmPOWER MD Program Cycle
BGE Response to MEEA Data Request No. 2
Request Received: August 9, 2023
Response Date: August 23, 2023

Item No. MEEADR02-1:

Regarding BGE's proposed Residential New Construction Program:

a. For each year from 2018-2022, how many residential gas accounts were activated for newly completed homes in BGE's Maryland service territory?
    i. For each year, how many of these accounts participated in BGE's Residential New Construction program?
b. For each year from 2018-2022, how many of these gas accounts only required a gas service connection in order to connect to BGE's distribution system?
    i. For each year, how many of these accounts that only required a gas service connection in order to connect to BGE's distribution system participated in BGE's Residential New Construction program?
c. For each year from 2018-2022, how many of these gas accounts required any level of gas main extension or construction in order to connect to BGE's distribution system?
    i. For each year, how many of these accounts that required any level of gas main extension or construction in order to connect to BGE's distribution system participated in BGE's Residential New Construction program?
d. For each year of the 2024-2026 plan period how many new residential gas accounts does BGE anticipate will be activated for homes that are newly completed within the plan period?
    i. By year, for each scenario, how many of these homes does BGE anticipate will participate in its Residential New Construction program?
e. Confirm that in BGE's proposal, customers who build homes using gas appliances will continue to be eligible to receive incentives. For any answer other than confirm please explain.

RESPONSE:

a. The Residential New Construction Program does not collect or track system-wide data.
    i. The number of homes coming through the program that have gas accounts is in the table below:

Program Year	Total number of new homes participating	Total number of new homes with gas accounts
2018	3,153	2,438
2019	2,877	2,062
2020	3,104	2,448
2021	2,820	2,333
2022	2,221	1,832

b. The Residential New Construction Program does not track gas service connections.

c. The Residential New Construction Program does not track gas main extension or construction.

d. The Residential New Construction Program plan estimates activities associated with construction of homes built to ENERGY STAR standards.

ii. The Residential New Construction Program plan does not make forecasts on whether a home will have a gas connection.

e. The Residential New Construction Program plan does not directly incentivize gas appliances for residential new construction. All appliance incentives offered for new construction are limited to efficient electric equipment only. The criteria for building a home to meet ENERGY STAR standards is set by EPA under the ENERGY STAR Residential New Construction Program. The BGE plan includes EPA's NextGen certification as an advanced tier which requires higher levels of efficiency and the major loads in the home use electricity.

Case No. 9705
Baltimore Gas and Electric Company
2024-2026 EmPOWER MD Program Cycle
BGE Response to MEEA Data Request No. 2
Request Received: August 9, 2023
Response Date: August 23, 2023

Item No. MEEADR02-2:

Please refer to BGE August 1st Plan at 96. Regarding Conservation Voltage Reduction (CVR), the Company states:

As of April 2023, BGE has enabled CVR on 128 substations, covering approximately 88% of BGE's primary 13 kV electric distribution system. In order to implement CVR, BGE is deploying new capacitor bank controllers and regulator controllers while also improving metering in distribution substations (providing individual phase metering for station voltages and individual feeder currents). The project will install a total of approximately 4,600 capacitor bank controllers, 9,200 overhead and pad-mount voltage sensors, 188 voltage regulators, and will upgrade metering at over 100 substations. The current plan is to complete the project by 2024 in coordination with the deployment of BGE's next-generation Distribution Automation communication network.

a. What portion of the CVR savings, in MWh, in each year in each of the Company's 2024-2026 Plan scenarios will come from capacitor bank controllers and regulator controllers that will be installed in 2024? In 2025? In 2026?

b. What portion of the CVR savings, in MWh, in each year of the Company's 2024-2026 scenarios will come from equipment installed prior to 2024?

RESPONSE:

a. Almost all reported savings for CVR is attributable to capacitor bank controllers and regulator controllers installed prior to the start of the 2024-2026 cycle. However, BGE must continue to employ resources to monitor and maintain the system.

b. Please see above response to MEEA DR2-2 (a).

Case No. 9705
Baltimore Gas and Electric Company
2024-2026 EmPOWER MD Program Cycle
BGE Response to MEEA Data Request No. 2
Request Received: August 9, 2023
Response Date: August 23, 2023

Item No. MEEADR02-4:

Please refer to BGE's August 1st filing at 96. The Company states "In 2011, the PSC directed all Maryland utilities, including BGE, to implement the CVR Program" and it is "is asking for approval of at least 660,000 MWh [reported CVR savings] consistent with the prior cycle's reported FTM savings."

a. Confirm that BGE will continue to implement CVR where it has already installed CVR controls regardless of the amount of CVR approved for the Company to report towards its EmPOWER goals. For example, if the Commission does not approve BGE's request to include "at least 660,000 MWh" of CVR savings will BGE disable the voltage controls that are currently in place and that have provided the basis of claimed savings in prior program years? For any answer other than confirm explain precisely which aspects of CVR BGE will cease to implement.

RESPONSE:

Confirmed.

Case No. 9705
Baltimore Gas and Electric Company
2024-2026 EmPOWER MD Program Cycle
BGE Response to MEEA Data Request No. 2
Request Received: August 9, 2023
Response Date: August 23, 2023

Item No. MEEADR02-6:

Please refer to BGE's August 1st filing at 11. Regarding the Company's Performance Based Cost Recovery Proposal:

a. The Company states "[t]he reward will be calculated by the Company at the end of each cycle." Is the Company proposing to calculate its own incentive on un-evaluated and un-verified savings? Please explain.
b. Does the Company propose to include benefits from initiatives that are not funded through EmPOWER, such as CVR, in its calculation of the PIM? Please explain.
c. Please provide the estimated PIM that BGE would receive for each year of the 2024-2026 Plan in each scenario if it achieves 100% of the goal in each year.
d. Please provide all analyses and workpapers that support these calculations.

RESPONSE:

a. The reward will be calculated on evaluated and verified savings.

b. The Company plans to include all benefits from measures that are approved by the Commission to be counted towards meeting our statutory MWh savings requirement. These programs are not included in the calculation of the SCT/MJCT.

c. Please see attached spreadsheet "MEEA DR02-6 (c-d) *Attachment 1*".

d. Please see attached spreadsheet "MEEA DR02-6 (c-d) *Attachment 1*" and refer to MEEA DR1-1; BCA Data Packet; Portfolio Level Results Tab.

Case No. 9705
Baltimore Gas and Electric Company
2024-2026 EmPOWER MD Program Cycle
BGE Response to MEEA Data Request No. 2-6 (c-d)
Request Received: August 9, 2023
Response Date: August 23, 2023

	Award Range MWh Target	Annual Reward	2023 Scenario Annual Estimated PIM	Middle Scenario Annual Estimated PIM	Maximum Scenario Annual Estimated PIM
Three Year Cycle Energy Savings Target					
	≥100%	10.0%	$ 18,039,433	$ 17,639,633	$ 18,811,667

Shared savings	**2024-2026 SCT/MJST**	**Average Annual SCT/MJST**
2023 Scenario	$ 541,183,000	$ 180,394,333
Middle Scenario	$ 529,189,000	$ 176,396,333
Maximum Scenairo	$ 564,350,000	$ 188,116,667

JG Note: These values do NOT include costs or benefits for electrification in any scenario

Case No. 9705
Baltimore Gas and Electric Company
2024-2026 EmPOWER MD Program Cycle
BGE Response to MEEA Data Request No. 2
Request Received: August 9, 2023
Response Date: August 23, 2023

Item No. MEEADR02-8:

Please refer to Section 2.1.6. Coordination with DHCD.

a. Has the Company discussed coordination of its proposed electrification programs with DHCD? Please provide the date, and a summary of each meeting BGE has had with DHCD regarding coordination of the proposed electrification programs.
b. Has the Company discussed coordination of the proposed Low to Moderate income component of the proposed Home Retrofit program with DHCD? Please provide the date, and a summary of each meeting BGE has had with DHCD regarding coordination of the proposed Low to Moderate income component of the proposed Home Retrofit program.
    i. What income eligibility criteria does BGE propose for its Low to Moderate income component of the proposed Home Retrofit program?
c. Has the Company discussed coordination of the proposed Multifamily program with DHCD? Please provide the date, and a summary of each meeting BGE has had with DHCD regarding coordination of the proposed Multifamily program.
    ii. Reference the statement "it is intended that BGE will only claim savings for measures that are directly funded by BGE's multifamily program, while DHCD may realize all coordinated project savings towards DHCD's low-income goals." [BGE Plan at 47] Is BGE proposing that both the Company and DHCD will report savings for measures that are directly funded by BGE's multifamily program? Please explain.

RESPONSE:

a. No, BGE and DHCD have regularly scheduled meetings at least once a month to discuss coordination and various program topics. However, coordination on Electrification has not been discussed.

b. No, BGE and DHCD have regularly scheduled meetings at least once a month to discuss coordination and various program topics. However, coordination on the proposed Low to Moderate income component of the proposed Home Retrofit program has not been discussed.

    i. The income eligibility would be above 250% of the Federal Poverty Level (FPL) and up to 400% of the FPL. BGE and its implementor would work to ensure that controls are in place to ensure that customers eligible for DHCD programs are directed to those programs.

c. BGE and DHCD have regularly scheduled meetings at least once a month to discuss various program topics. BGE met with DHCD on multiple occasions to discuss offering a multi-

family option based on programs in other territories. BGE significantly modified its proposed Multi-Family Program to address the specific concerns and feedback received during conversations with DHCD.

ii. As proposed, BGE will report only the savings for measures that BGE's Multi-Family Program directly funds. Whereas, DHCD can report if desired, the total savings inclusive of all measures installed at the property towards the state's low-income goal. DHCD would account for the total low-income savings impact from both funding sources, and report the total eligible savings towards the state's low-income goal (see p. 17, Table 7 in DHCD plan Case No. 9705 (ML 304379)).

Case No. 9705
Baltimore Gas and Electric Company
2024-2026 EmPOWER MD Program Cycle
BGE Response to MEEA Data Request No. 2
Request Received: August 9, 2023
Response Date: August 23, 2023

Item No. MEEADR02-9:

Please refer to Section 6.1 Composting Pilot, if the pilot is successful in demonstrating GHG abatement from composting, what would the potential implications be for BGE? Would BGE potentially implement a full-scale composting program for its customers?

a. Has BGE had any discussions with the Maryland Department of Environment (MDE) regarding this pilot proposal? Please provide the date, and a summary of each meeting BGE has had with MDE regarding the proposed composting pilot program.

RESPONSE:

BGE would potentially implement a full-scale composting program in future cycles if the following conditions are met:

- Statutory or regulatory goals of EmPOWER shift from MWh to GHG abatement similar to what was being discussed in the Future Programming Working Group and 2023 Maryland General Assembly.
- There is enough customer interest and realized GHG abatement to design a cost-effective, large-scale program.

a. BGE discussed the pilot concept during the EmPOWER Technical Conference on April 28, 2023 in Baltimore. MDE was in attendance and asked a few high-level questions, but we did not document the specific questions or responses.

Case No. 9705
&
Case No. 9648
Baltimore Gas and Electric Company
2024-2026 EmPOWER MD Program Cycle
BGE Response to MEEA Data Request No. 3
Request Received: September 12, 2023
Response Date: October 13, 2023

Item No. MEEADR03-1:

Please refer to BGE's responses to Item No. MEEA DR02-1, questions "a" through "c." BGE states that "the Residential New Construction Program does not collect or track system-wide data." However the questions did not ask if the program collected the referenced data. For clarity, the questions are seeking data from any division(s) of BGE (such as sales and marketing, system planning, etc.) which do track connections to newly constructed homes. Please see the revised questions below:

a. For each year from 2018-2022, how many residential gas accounts were activated for newly completed homes in BGE's Maryland service territory?
b. For each year from 2018-2022, how many of these newly completed homes required only a gas service connection in order to connect to BGE's distribution system?
c. For each year from 2018-2022, how many of these newly completed homes required any level of gas main extension or construction in addition to a gas service connection in order to connect to BGE's distribution system?

RESPONSE:[1]

Data specifically for "newly completed homes" is not tracked. The data is for all new residential gas customers, including new homes and existing homes connecting to gas service.

a.

Year	New Residential Gas Customers
2018	5607
2019	5865
2020	5721
2021	5643
2022	4562

[1] Response provided pursuant to Commission Order No. 90834 on MEEA's Motion to Compel.

b.

Year	New residential gas customers that only required a gas service line
2018	719
2019	724
2020	599
2021	438
2022	154*

* 2022 Data is available only through April 2022. Given historical data, this number may be understated

c.

Year	New residential customers requiring gas main extension or construction
2018	4888
2019	5141
2020	5122
2021	5205
2022	4408*

* Gas service connection detail is available only through April 2022. Given historical data, this number may be overstated.

Case No. 9705
&
Case No. 9648
Baltimore Gas and Electric Company
2024-2026 EmPOWER MD Program Cycle
BGE Response to MEEA Data Request No. 4
Request Received: September 20, 2023
Response Date: October 4, 2023

Item No. MEEADR04-1:

Please refer to BGE's response to MEEA DR2-2 a: "Almost all reported savings for CVR is attributable to capacitor bank controllers and regulator controllers installed prior to the start of the 2024-2026 cycle. However, BGE must continue to employ resources to monitor and maintain the system."

a. Please provide any and all itemized and total costs to "employ resources to monitor and maintain the [CVR] system" that are included in the Company's EmPOWER plan proposal.
b. Please provide documentation of any operations and maintenance costs associated with "employ[ing] resources to monitor and maintain the [CVR] system" that were included in the Company's cost proposal in its Multi-Year Rate Plan filing in Case No. 9692.

RESPONSE:

Please see the following:

a. There are no CVR related costs included in the Company's EmPOWER plan proposal.

b. BGE is in the process of deploying CVR across its service territory and plans to complete the deployment in 2024. The operations and maintenance costs associated with CVR are spread across multiple disciplines. These costs were included in the MYP but were not specifically identified as CVR-related costs.

The key component of the CVR program is the software application by Open Systems International (OSI) that optimizes the operation of BGE field devices such as distribution capacitors. The historical cost to support the CVR application increased over time, in correlation to the increasing number of CVR devices deployed in the field, until they averaged approximately $400,000 annually in 2020 and 2021. In 2021, OSI CVR application was expanded to include BGE SCADA capabilities, and while the overall support cost increased in 2022 as a result, the CVR-related costs remained consistent at approximately $400,000 per year. In 2023, Exelon entered into an enterprise maintenance agreement with Open Systems International (OSI). The enterprise agreement is

a fixed cost contract covering all Exelon utilities, and as a result there are no itemized cost per each individual application. While there will be no separate line item for CVR software maintenance costs, these activities are necessary for the continued operation of the CVR program. See the table below for the annual OSI CVR maintenance costs.

	2017	2018	2019	2020	2021
OSI Annual CVR Maintenance Costs	$265,481	$273,520	$306,210	$376,476	$416,612

In addition to the software application, BGE continues to maintain the field devices associated with the CVR program. These activities include maintenance activities for approximately 5,000 distribution capacitors deployed on BGE's distribution system, associated sensors and controllers. BGE plans to spend approximately $800,000 (direct costs) annually for these activities in 2024-2026. See the table below for BGE's annual field device corrective maintenance budget for 2024 through 2026. It should be noted that while these capacitor maintenance costs may not be considered incremental to the CVR program, no CVR MWh savings can be achieved without a capacitor, sensor and controller working in tandem.

	2024	2025	2026
CVR Field Device Corrective Maintenance Costs	$784,849	$801,743	$790,744

Finally, BGE has dedicated engineering support for the CVR application, with currently 3 FTEs dedicating a portion of their time to the deployment of the CVR program. Once the program deployment completes in 2024, BGE will continue to support CVR with 2 FTEs. The total cost of this support will be approximately $250,000 a year.

Case No. 9692
Baltimore Gas and Electric Co.
Response to Sierra Club Data Request 6
Request Received: May 23, 2023
Response Date: June 07, 2023
Sponsor(s): Laura Wright

Item No.: SCDR06-10

Please refer to the Company's response to OPCDR12-10.c: "The budget for the CVR program is captured in two Projects: 60756: Conservation Voltage Reduction (CVR) Capacitor Bank Controllers and 61146: Conservation Voltage Reduction (CVR). The total capital budget for 2024 is approximately $4 million. BGE plans to complete the CVR deployment by December 31, 2024."

a. Is the capital budget provided in the response the only cost associated with CVR that is included in the MYP?
b. If there are other costs associated with CVR in the MYP, please indicate the budget amounts and categories of expense, and indicate where in the MYP those costs are captured.

RESPONSE:

a. Yes, the costs referenced above are the only costs included in the 2024-2026 period associated with the Conservation Voltage Reduction program.

b. There are no other projected costs associated with Conservation Voltage Reduction from 2024-2026.

APPENDIX C
PEPCO DATA RESPONSES

Maryland Energy Efficiency Advocates
Data Request Set No. 2
To: Potomac Electric Power Company ("PEPCO" or "Company")
PSC Docket No. 9705
8/14/2023

MEEA DR 2-4

c. Please provide the estimated PIM that Pepco would receive for each year of the 2024-2026 Plan in each scenario if it achieves 100% of the goal in each year.

Three Year Cycle Energy Savings Target	Award Range MWh Target	Annual Reward	2023 Scenario Annual Estimated PIM	Middle Scenario Annual Estimated PIM	Maxium Scneario Annual Estimated PIM
	>/=100%	10.00%	$ 25,243,628	$ 26,347,656	$ 36,034,626

Shared Savings	2024-2026 Cycle SCT/MJST*	Average Annual SCT/MJST
2023 Scenario	$757,308,836	$252,436,279
Middle Scenario	$790,429,668	$263,476,556
Maximum Scenario	$1,081,038,770	$360,346,257

*Based on Pepco BCA Net Benefits as forecasted at this time, but actual benefits will be determined through EMV processes and may be different than forecasted

$ 75,730,883.60

POTOMAC ELECTRIC POWER COMPANY
MARYLAND CASE NO. 9705
EMPOWER MD
RESPONSE TO MEEA DATA REQUEST NO. 2

QUESTION NO. 6
Regarding Pepco's Residential New Construction program:

a. For each year from 2020-2022, how many new homes that participated in Pepco's Residential New Construction program used natural gas for any end use?

b. Confirm that in Pepco's proposal, customers who build homes using gas appliances will continue to be eligible to receive incentives. For any answer other than confirm please explain.

RESPONSE:

a.

Year	PEPCO Total number of new homes	PEPCO Total number of new homes with gas end use
2020	393	369
2021	479	305
2022	657	398

The number of homes with gas end-use includes propane and natural gas.

b. Yes, homes using gas appliances will be eligible, however, there are increased incentives for all-electric tiers of participants such as the ENERGY STAR Next Gen certification as well as bonuses for high efficiency air source heat pumps and heat pump water heaters.

SPONSOR: The Company

POTOMAC ELECTRIC POWER COMPANY
MARYLAND CASE NO. 9705
EMPOWER MD
RESPONSE TO MEEA DATA REQUEST NO. 2

QUESTION NO. 8
Regarding Conservation Voltage Reduction (CVR), the Company states "[a]ll costs associated with the program will be separately tracked and, per the order, recovery will be sought in subsequent base electric distribution rate cases."

a. Please provide specific cost accounting detail of any and all costs associated with CVR that were included in the Company's current multi-year rate plan (MYP) in Case No. 9702.

    i. Please provide proposed capital costs and O&M costs separately for each year of the MYP.

b. What portion of the CVR savings, in MWh, in each year in each of the Company's 2024-2026 Plan scenarios will come from voltage regulation equipment that will be installed in 2024? In 2025? In 2026?

c. What portion of the CVR savings, in MWh, in each year in each of the Company's 2024-2026 scenarios will come from equipment installed prior to 2024?

d. Please confirm that Pepco will continue to implement CVR where it has already installed CVR controls regardless of the amount of CVR approved for the Company to report towards its EmPOWER goals. For any answer other than confirm explain precisely which aspects of CVR Pepco will cease to implement.

RESPONSE:

a. The Company is not proposing to recover the costs associated with its CVR program through the EmPOWER surcharge. Nonetheless, because the costs associated with CVR are minimal, Pepco does not have specific accounting details of costs associated with CVR separately broken out in its current MYP.
    i. Please see above.

b. At this time, Pepco has not identified any voltage regulation equipment that needs to be installed in 2024, 2025, or 2026.

c. At this time, all forecasted savings from CVR would be from equipment installed prior to 2024.

d. Confirmed, Pepco will continue to implement CVR.

SPONSOR: The Company

APPENDIX D
WGL DATA RESPONSES

MARYLAND PUBLIC SERVICE COMMISSION

WASHINGTON GAS LIGHT COMPANY

Case No. 9705

WASHINGTON GAS COMPANY RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY
DIRECTED TO THE MARYLAND ENERGY ADMINISTRATION

MEEA DATA REQUEST NO. 2

QUESTION NO. 2-1

Q. Regarding WGL's proposed Residential New Construction Program:

a. For each year from 2018-2022, how many residential accounts were activated for newly completed homes in WGL's Maryland service territory?

i. For each year, how many of these accounts participated in WGL's Residential New Construction program?

b. For each year from 2018-2022, how many of these accounts only required a gas service connection in order to connect to WGL's distribution system?

i. For each year, how many of these accounts participated in WGL's Residential New Construction program?

c. For each year from 2018-2022, how many of these accounts required any level of gas main extension or construction in order to connect to WGL's distribution system?

i. For each year, how many of these accounts participated in WGL's Residential New Construction program?

d. For each year of the 2024-2026 plan period how many new residential accounts does WGL anticipate will be activated for homes that are newly completed within the plan period?

i. By year, for each scenario, how many of these homes does WGL anticipate will participate in its Residential New Construction program?

WASHINGTON GAS' RESPONSE 08/23/2023

A. Please see corresponding responses below:

a. A total of 28,096 residential accounts were activated for newly completed homes between 2018 and 2022.

Maryland Installed Residential Meters By Year

Year	Main	Service Only	Unknown	Total
2018	4,556	743	271	5,570
2019	5,020	563	1	5,584
2020	4,916	517	1	5,434
2021	5,373	759	0	6,132
2022	4,780	595	1	5,376

a (i). Identifying newly activated accounts is not a reporting or evaluation metric that is captured through monitoring processes related to the EmPOWER Maryland Residential New Construction Program. A total 6,091 homes participated in the Residential New Construction Program from 2018 through 2022.

b. See response to part (a).

b(i). Identifying newly activated accounts that required only a gas service connection is not a reporting or evaluation metric that is captured through monitoring processes related to the EmPOWER Maryland Residential New Construction Program.

c. See response to part (a).

c(i). Identifying newly activated accounts that required a level of gas main extension or construction is not a reporting or evaluation metric that is captured through monitoring processes related to the EmPOWER Maryland Residential New Construction Program.

d. The Company anticipates a total of 13,745 new residential accounts to be activated for new homes completed during the 2024-2026.

2024 – 4,455
2025 – 4,595
2026 – 4,695

The analysis to determine this forecast was conducted separately of the analysis conducted for EmPOWER planning.

d(i). Of the 13,745 new residential accounts to anticipated to be activated during the 2024-2026 program cycle, the Company anticipates that all will be participants in the Residential New Construction Program for 2024-2026 if approved. This applies for all three scenarios (BAU, MID, and MAX) shown in the Company's EmPOWER proposal.

SPONSOR: Josh McClelland
Director, Energy Efficiency

MARYLAND PUBLIC SERVICE COMMISSION

WASHINGTON GAS LIGHT COMPANY

Case No. 9705

WASHINGTON GAS COMPANY RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY
DIRECTED TO THE MARYLAND ENERGY ADMINISTRATION

MEEA DATA REQUEST NO. 2

QUESTION NO. 2-3

Q. Regarding section *1.7.2 Performance Incentive Mechanism (PIM)*

a. Is WGL proposing a specific PIM at this time? If yes, please provide the specific criteria and potential award WGL is proposing.

b. If yes, please provide the estimated PIM that WGL would receive for each year of the 2024-2026 Plan in each scenario if WGL achieves 100% of the goal in each year.

WASHINGTON GAS' RESPONSE 08/23/2023

A. Please see corresponding responses below:

a. No, per Order No. 90546 (at page 19), the Commission expected the utilities to provide "performance-based recovery approaches in addition to traditional recovery approaches". As such, the Company provided suggested objectives, metrics, and characteristics to better inform the Commission's decision regarding a future PIM for EmPOWER Maryland.

b. N/A.

SPONSOR:
Josh McClelland
Director, Energy Efficiency

APPENDIX E
DPL DATA RESPONSES

DELMARVA POWER & LIGHT COMPANY
MARYLAND CASE NO. 9705
EMPOWER MD
RESPONSE TO MEEA DATA REQUEST NO. 2

QUESTION NO. 2
Referring to DPL's Plan at 8 and to DPL's statement that "the Commission limited the claimable savings from front-of-the meter programs, like CVR, to no more than 20% of the goal savings."

Confirm that the FTM resources that DPL is referring to will provide savings for customers regardless of whether or not the Commission allows those savings to count towards the EmPOWER compliance requirements. For any answer other than confirm, please explain and quantify specifically the MWh savings and the programs that would produce them, on an annual and lifetime savings basis, that customers would not receive if the Commission maintains a 20% limit on FTM resources.

RESPONSE:

The Company will still run FTM programs to the full extent possible, but only claim the allowable amount towards EmPOWER goals.

SPONSOR: The Company

Maryland Energy Efficiency Advocates
Data Request Set No. 2
To: Delmarva Power and Light ("DPL" or "Company")
PSC Docket No. 9705
8/14/2023

MEEA DR 2-4

c. Please provide the estimated PIM that DPL would receive for each year of the 2024-2026 Plan in each scenario if it achieves 100% of the goal in each year.

Three Year Cycle Energy Savings Target	Award Range MWh Target	Annual Reward	2023 Scenario Annual Estimated PIM	Middle Scenario Annual Estimated PIM	Maxium Scneario Annual Estimated PIM
	>/=100%	10.00%	$ 7,290,130	$ 7,725,275	$ 11,130,770

Shared Savings	2024-2026 Cycle SCT/MJST*	Average Annual SCT/MJST
2023 Scenario	$218,703,914	$72,901,305
Middle Scenario	$231,758,245	$77,252,748
Maximum Scenario	$333,923,109	$111,307,703

*Based on DPL BCA Net Benefits as forecasted at this time, but actual benefits will be determined through EMV processes and may be different than forecasted

APPENDIX F
SMECO DATA RESPONSES

Southern Maryland Electric Cooperative, Inc.
Response to
Maryland Energy Efficiency Advocates ("MEEA")
Data Request No. 2
Case No. 9705 – EmPOWER Maryland 2024-2026 Cycle

Item No. 2-3:
Referring to SMECO's Plan at 65, regarding Conservation Voltage Reduction (CVR), the Company states that its "CVR program will consist of reducing distribution substation bus voltages on eligible distribution substation transformers. Voltage on distribution feeders, fed by these transformers, will be monitored via AMI meters to ensure service quality is maintained. SMECO had previously implemented this program in the EmPOWER 2018-2020 program cycle."

a. Is SMECO proposing to install any new voltage reducing equipment on any substations as a result of its decision to restart the CVR program? If yes, please detail the equipment that it plans to install, provide cost estimates for the equipment, and confirm that SMECO did not previously implement CVR on the affected circuits.
b. Did SMECO stop monitoring substation bus voltages on eligible distribution substation transformers when it stopped implementing the 2018-2020 CVR program? Please explain.
c. Please provide specific cost accounting detail of any and all costs associated with CVR that will be recovered outside of the EmPOWER surcharge.
   i. Please provide proposed capital costs and O&M costs separately for each year of the MYP.
d. What portion of the CVR savings, in MWh, in each year in each of the Company's 2024-2026 Plan scenarios will come from voltage regulation equipment that will be installed in 2024? In 2025? In 2026?
e. What portion of the CVR savings, in MWh, in each year in each of the Company's 2024-2026 scenarios will come from equipment installed prior to 2024?
f. Confirm that SMECO will continue to implement CVR where it has already installed CVR controls regardless of the amount of CVR approved for the Company to report towards its EmPOWER goals. For any answer other than confirm explain precisely which aspects of CVR SMECO will cease to implement.

Response:

a. No, SMECO is not proposing to install any new voltage reducing equipment
b. No, SMECO continually monitors substation bus voltages
c. SMECO will be unable to provide that level of detail because it is captured within routine spend.
d. SMECO does not plan to install new voltage regulation equipment 2024-2026
e. All of the forecasted energy savings for 2024-2026 will come from equipment installed prior to 2024.
f. SMECO confirms.

APPENDIX G
PE DATA RESPONSES

2023 - Table ES-3D

EmPOWER Maryland Energy Efficiency, Conservation, and Demand Response Forecasted Total Program Costs by Category for 2024-2026 Plan

Program Year: 2024-2026	Program Category (EE vs Electrification)	Operations and Maintenance Costs	Capital Costs	Utility Administration Costs	Outside Services	Marketing Cost	Evaluation Monitoring and Verification Costs	Total Non-incentive Costs	Customer Incentives	Total Program Costs
Energy Efficiency and Conservation Programs										
Residential EE&C Programs										
Energy Efficient Products										
Appliance Recycling	*EE*	$0	$0	$212,388	$1,376,065	$380,775	$53,710	$2,022,938	$1,099,898	$3,122,835
Appliance Rebates	*EE*	$0	$0	$528,417	$3,400,165	$940,266	$273,061	$5,141,909	$10,734,646	$15,876,555
	Electrification	$0	$0	$0	$0	$0	$0	$0	$0	$0
Home Retrofit										
Home Energy Retrofit	*EE*	$0	$0	$789,520	$4,365,960	$2,117,454	$472,286	$7,745,219	$19,714,811	$27,460,030
	Electrification	$0	$0	$0	$0	$0	$0	$0	$0	$0
HVAC	*EE*	$0	$0	$201,822	$913,190	$737,283	$325,965	$2,178,260	$16,774,263	$18,952,522
	Electrification	$0	$0	$0	$0	$0	$0	$0	$0	$0
ENERGY STAR® for New Homes	*EE*	$0	$0	$117,515	$925,152	$42,341	$108,899	$1,193,907	$5,137,767	$6,331,674
Behavior Based Program	*EE*	$0	$0	$457,246	$3,600,000	$149,295	$73,614	$4,280,156	$0	$4,280,156
Limited Income Energy Efficiency Program (DHCD)	*EE*	$0	$0	$1,120,895	$35,447,470	$0	$639,946	$1,760,841	$0	$1,760,841
Financing - Res		$0	$0	$0	$96,000	$0	$0	$96,000	$4,353,429	$4,449,429
Residential Programs Subtotal	**EE**	**$0**	**$0**	**$3,427,802**	**$14,676,532**	**$4,367,415**	**$1,947,481**	**$24,419,229**	**$57,814,812**	**$82,234,041**
Residential Programs Subtotal	**Electrification**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Commercial and Industrial EE&C Programs										
Small Business Solutions - Direct Install	*EE*	$0	$0	$926,810	$6,631,699	$982,192	$511,577	$9,052,277	$20,692,278	$29,744,555
	Electrification	$0	$0	$0	$0	$0	$0	$0	$0	$0
Energy Solutions for Business										
Prescriptive	*EE*	$0	$0	$1,208,480	$6,477,215	$3,431,907	$749,134	$11,866,736	$31,690,061	$43,556,797
	Electrification	$0	$0	$0	$0	$0	$0	$0	$0	$0
Custom	*EE*	$0	$0	$2,743,396	$20,613,121	$2,041,928	$1,157,704	$26,556,148	$40,756,043	$67,312,191
	Electrification	$0	$0	$0	$0	$0	$0	$0	$0	$0
Retrocommissioning/Building Operations	*EE*	$0	$0	$1,971,742	$14,085,706	$2,167,448	$762,534	$18,987,430	$25,348,461	$44,335,890
	Electrification	$0	$0	$0	$0	$0	$0	$0	$0	$0
Limited Income Energy Efficiency Program - C&I (DHCD)	*EE*	$0	$0	$151,521	$760,253	$0	$15,956	$167,477	$0	$167,477
Financing - C&I		$0	$0	$0	$24,000	$0	$0	$24,000	$4,102,028	$4,126,028
Commercial and Industrial EE&C Programs Subtotal	**EE**	**$0**	**$0**	**$7,001,948**	**$47,831,741**	**$8,623,474**	**$3,196,905**	**$66,654,068**	**$122,588,871**	**$189,242,939**
Commercial and Industrial EE&C Programs Subtotal	**Electrification**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Energy Efficiency and Conservation Subtotal		**$0**	**$0**	**$10,429,750**	**$62,508,273**	**$12,990,889**	**$5,144,385**	**$91,073,297**	**$180,403,683**	**$271,476,980**
Demand Response Programs										
Demand Response										
Load Control - Res	*EE*	$0	$0	$0	$0	$0	$0	$0	$0	$0
Demand Response Programs Subtotal		**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
EmPOWER Maryland Portfolio Total										
All Program Total		**$0**	**$0**	**$10,909,750**	**$63,408,273**	**$13,290,889**	**$5,264,385**	**$92,873,297**	**$181,603,683**	**$274,476,980**
Program Investigation Development and Design (PIDD)										
Residential PIDD Programs		$ -	$ -	$ 480,000	$ 900,000	$ 300,000	$ 120,000	$ 1,800,000	$ 1,200,000	$ 3,000,000
C&I PIDD Programs		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Demand Response PIDD Programs		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Unidentified PIDD Programs		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
PIDD Programs Subtotal		**$ -**	**$ -**	**$ 480,000**	**$ 900,000**	**$ 300,000**	**$ 120,000**	**$ 1,800,000**	**$ 1,200,000**	**$ 3,000,000**

Attachment I-6 - 2023 Scenario
Performance Incentive Mechanism (PIM) calculation
for illustrative purposes only

Notes			2024 (1)	2025 (2)	2026 (3)	3 Year Total	Cumulative (4)
1	Net Benefits Achieved ($M)	**A**	$24.31	$27.35	$27.35		$79.02
2	Energy Savings Achieved (GWh)	**B**	148	167	167		482
3	Targets (GWh)	**C**	148	167	167		482
	Energy Savings Achievement (%)	**= B / C**	100.00%	100.00%	100.00%		100.00%
4	Annual Budget ($M)	**D**	$92.93	$105.90	$111.85		$310.68
	Tier 3 (>105%)	**=15% x A**	$3.65	$4.10	$4.10		$11.85
	Tier 2 (>95-105%)	**=10% x A**	$2.43	$2.74	$2.74		$7.90
	Tier 1 (>85%-95%)	**=5% x A**	$1.22	$1.37	$1.37		$3.95
	Earned Incentive, uncapped ($M)		$2.43	$2.74	$2.74	$7.90	$7.90
5	Annual Cap ($M)	**=10% x D**	$9.29	$10.59	$11.19	$31.07	$31.07
6	Earned Incentive, capped ($M)		**$2.43**	**$2.74**	**$2.74**	**$7.90**	
7	Cumulative Incentive Opportunity ($M)						**($0.00)**

Notes

1. *Note that the values shown here are based on the net benefits provided in Attachment A, Table ES4 and are allocated to each year based on the ratio of the annual target to the three-year goal. The actual values that will be used will be as calculated based on benefits derived from actual energy savings.*
2. *Note that the values shown here are illustrative only. The actual values that will be used will be based on verified energy savings, as shown in Annual MD EmPOWER Report.*
3. *From Table 2*
4. *Values used in this example are from Table 4, actual values used will be as approved by the Commission.*
5. *Calculated as 10% of the budget as approved by the Commission.*
6. *This incentive amount would be recovered on an after-tax basis, consistent with cost recovery methodology as describe in this Plan and as approved by the Commission.*
7. *Should cumulative impacts of the three year term exceed those earned in individual years, the Company may earn the incremental incentive based on total three year performance. The cumulative incentive is still limited by the total three year incentive cap.*

Attachment I-6 - Middle Scenario
Performance Incentive Mechanism (PIM) calculation
for illustrative purposes only

Notes			2024 (1)	2025 (2)	2026 (3)	3 Year Total	Cumulative (4)
1	Net Benefits Achieved ($M)	**A**	$28.16	$31.67	$31.67		$91.50
2	Energy Savings Achieved (GWh)	**B**	148	167	167		482
3	Targets (GWh)	**C**	148	167	167		482
	Energy Savings Achievement (%)	**= B / C**	100.00%	100.00%	100.00%		100.00%
4	Annual Budget ($M)	**D**	$105.29	$121.61	$127.52		$354.42
	Tier 3 (>105%)	**=15% x A**	$4.22	$4.75	$4.75		$13.73
	Tier 2 (>95-105%)	**=10% x A**	$2.82	$3.17	$3.17		$9.15
	Tier 1 (>85%-95%)	**=5% x A**	$1.41	$1.58	$1.58		$4.58
	Earned Incentive, uncapped ($M)		$2.82	$3.17	$3.17	$9.15	$9.15
5	Annual Cap ($M)	**=10% x D**	$10.53	$12.16	$12.75	$35.44	$35.44
6	Earned Incentive, capped ($M)		**$2.82**	**$3.17**	**$3.17**	**$9.15**	
7	Cumulative Incentive Opportunity ($M)						**$0.00**

Notes

1. *Note that the values shown here are based on the net benefits provided in Attachment A, Table ES4 - Middle and are allocated to each year based on the ratio of the annual target to the three-year goal. The actual values that will be used will be as calculated based on benefits derived from actual energy savings.*
2. *Note that the values shown here are illustrative only. The actual values that will be used will be based on verified energy savings, as shown in Annual MD EmPOWER Report.*
3. *From Table 2*
4. *Values used in this example are from Table 4, actual values used will be as approved by the Commission.*
5. *Calculated as 10% of the budget as approved by the Commission.*
6. *This incentive amount would be recovered on an after-tax basis, consistent with cost recovery methodology as describe in this Plan and as approved by the Commission.*
7. *Should cumulative impacts of the three year term exceed those earned in individual years, the Company may earn the incremental incentive based on total three year performance. The cumulative incentive is still limited by the total three year incentive cap.*

Attachment I-6 - Max Scenario
Performance Incentive Mechanism (PIM) calculation
for illustrative purposes only

Notes			2024 (1)	2025 (2)	2026 (3)	3 Year Total	Cumulative (4)
1	Net Benefits Achieved ($M)	**A**	$13.40	$15.08	$15.08		$43.56
2	Energy Savings Achieved (GWh)	**B**	148	167	167		482
3	Targets (GWh)	**C**	148	167	167		482
	Energy Savings Achievement (%)	**= B / C**	100.00%	100.00%	100.00%		100.00%
4	Annual Budget ($M)	**D**	$147.49	$178.32	$184.14		$509.95
	Tier 3 (>105%)	**=15% x A**	$2.01	$2.26	$2.26		$6.53
	Tier 2 (>95-105%)	**=10% x A**	$1.34	$1.51	$1.51		$4.36
	Tier 1 (>85%-95%)	**=5% x A**	$0.67	$0.75	$0.75		$2.18
	Earned Incentive, uncapped ($M)		$1.34	$1.51	$1.51	$4.36	$4.36
5	Annual Cap ($M)	**=10% x D**	$14.75	$17.83	$18.41	$50.99	$50.99
6	Earned Incentive, capped ($M)		**$1.34**	**$1.51**	**$1.51**	**$4.36**	
7	Cumulative Incentive Opportunity ($M)						**$0.00**

Notes

1. *Note that the values shown here are based on the net benefits provided in Attachment A, Table ES4 - Max and are allocated to each year based on the ratio of the annual target to the three-year goal. The actual values that will be used will be as calculated based on benefits derived from actual energy savings.*
2. *Note that the values shown here are illustrative only. The actual values that will be used will be based on verified energy savings, as shown in Annual MD EmPOWER Report.*
3. *From Table 2*
4. *Values used in this example are from Table 4, actual values used will be as approved by the Commission.*
5. *Calculated as 10% of the budget as approved by the Commission.*
6. *This incentive amount would be recovered on an after-tax basis, consistent with cost recovery methodology as describe in this Plan and as approved by the Commission.*
7. *Should cumulative impacts of the three year term exceed those earned in individual years, the Company may earn the incremental incentive based on total three year performance. The cumulative incentive is still limited by the total three year incentive cap.*

Table 4: Potomac Edison 2024-2026 Portfolio Costs			
Program Year	**2023 Scenario**	**Middle Scenario**	**Maximum GHG Scenario**
2024	$92,930,252	$105,289,243	$147,487,864
2025	$105,900,667	$121,611,299	$178,321,662
2026	$111,853,784	$127,518,499	$184,138,308
Total	**$310,684,703**	**$354,419,041**	**$509,947,833**

2023 - Table ES-4 Revised

EmPOWER Maryland Energy Efficiency, Conservation, and Demand Response Plan and Programmatic Cost Effectiveness for 2024-2026 - NPV for Costs and Benefits

	Program Category (EE vs Electrification)	MD Jurisdictional Cost Test (MJCT)			All Ratepayers Test (TRC)			Utility/Administrator Test			Participants Test			Ratepayer Impact Test (RIM)		
		NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio	NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio	NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio	NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio	NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio
Energy Efficiency and Conservation Programs																
Residential EE&C Programs		**$ 123,835**	**$ 99,001**	**0.8**	**$ 117,360**	**$ 55,519**	**0.5**	**$ 66,286**	**$ 25,806**	**0.4**	**$ 97,589**	**$ 103,039**	**1.1**	**$ 93,248**	**$ 28,209**	**0.3**
Energy Efficient Products																
Appliance Recycling	*EE*	*$ 1,859*	*$ 4,376*	*2.4*	*$ 1,762*	*$ 1,580*	*0.9*	*$ 2,719*	*$ 983*	*0.4*	*$ -*	*$ 3,646*	*-*	*$ 4,094*	*$ 983*	*0.2*
Appliance Rebates	*EE*	*$ 34,968*	*$ 24,788*	*0.7*	*$ 33,147*	*$ 11,194*	*0.3*	*$ 13,828*	*$ 6,235*	*0.5*	*$ 28,660*	*$ 9,341*	*0.3*	*$ 20,070*	*$ 6,934*	*0.3*
	Electrification	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
Home Retrofit and Optimization																
Home Energy Retrofit	*EE*	*$ 23,698*	*$ 27,807*	*1.2*	*$ 22,461*	*$ 18,395*	*0.8*	*$ 23,913*	*$ 6,007*	*0.3*	*$ 15,702*	*$ 41,078*	*2.6*	*$ 31,130*	*$ 6,928*	*0.2*
	Electrification	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
HVAC	*EE*	*$ 49,352*	*$ 11,481*	*0.2*	*$ 46,758*	*$ 7,158*	*0.2*	*$ 16,494*	*$ 2,581*	*0.2*	*$ 44,856*	*$ 21,485*	*0.5*	*$ 18,137*	*$ 2,610*	*0.1*
	Electrification	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
ENERGY STAR for New Homes	*EE*	*$ 8,476*	*$ 18,456*	*2.2*	*$ 8,031*	*$ 10,437*	*1.3*	*$ 5,511*	*$ 5,951*	*1.1*	*$ 6,990*	*$ 17,750*	*2.5*	*$ 11,016*	*$ 6,705*	*0.6*
Behavior Based Program	*EE*	*$ 5,393*	*$ 12,093*	*2.2*	*$ 5,117*	*$ 6,755*	*1.3*	*$ 3,737*	*$ 4,048*	*1.1*	*$ 1,379*	*$ 9,740*	*7.1*	*$ 8,716*	*$ 4,048*	*0.5*
Financing - Res		*$ 89*	*$ -*	*-*	*$ 85*	*$ -*	*-*	*$ 85*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ 85*	*$ -*	*-*
Residential Programs Subtotal	***EE***	**$ 123,745**	**$ 99,001**	**0.8**	**$ 117,275**	**$ 55,519**	**0.5**	**$ 66,202**	**$ 25,806**	**0.4**	**$ 97,589**	**$ 103,039**	**1.1**	**$ 93,163**	**$ 28,209**	**0.3**
Residential Programs Subtotal	***Electrification***	**$ -**	**$ -**	**-**	**$ -**	**$ -**	**-**	**$ -**	**$ -**	**-**	**$ -**	**$ -**	**-**	**$ -**	**$ -**	**-**
Commercial and Industrial EE&C Programs		**$182,706**	**$286,562**	**1.6**	**$173,102**	**$138,530**	**0.8**	**$160,936**	**$98,623**	**0.6**	**$115,137**	**$319,267**	**2.8**	**$247,480**	**$96,902**	**0.4**
Small Business Solutions - Direct Install	*EE*	*$ 21,760*	*$ 51,508*	*2.4*	*$ 20,622*	*$ 26,194*	*1.3*	*$ 25,888*	*$ 20,553*	*0.8*	*$ 12,724*	*$ 56,355*	*4.4*	*$ 41,898*	*$ 20,553*	*0.5*
	Electrification	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
Energy Solutions for Business																
Prescriptive	*EE*	*$ 45,049*	*$ 92,044*	*2.0*	*$ 42,695*	*$ 50,328*	*1.2*	*$ 37,929*	*$ 30,769*	*0.8*	*$ 32,336*	*$ 96,493*	*3.0*	*$ 62,973*	*$ 29,048*	*0.5*
	Electrification	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
Custom	*EE*	*$ 75,329*	*$ 95,535*	*1.3*	*$ 71,358*	*$ 38,951*	*0.5*	*$ 58,548*	*$ 29,841*	*0.5*	*$ 48,221*	*$ 108,191*	*2.2*	*$ 88,920*	*$ 29,841*	*0.3*
	Electrification	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
Retrocommissioning/Building Operations	*EE*	*$ 40,545*	*$ 47,476*	*1.2*	*$ 38,406*	*$ 23,057*	*0.6*	*$ 38,550*	*$ 17,460*	*0.5*	*$ 21,856*	*$ 58,227*	*2.7*	*$ 53,668*	*$ 17,460*	*0.3*
	Electrification	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
Financing - C&I		*$ 22*	*$ -*	*-*	*$ 21*	*$ -*	*-*	*$ 21*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ 21*	*$ -*	*-*
Commercial and Industrial EE&C Programs Subtotal	***EE***	**$ 182,683**	**$ 286,562**	**1.6**	**$ 173,081**	**$ 138,530**	**0.8**	**$ 160,915**	**$ 98,623**	**0.6**	**$ 115,137**	**$ 319,267**	**2.8**	**$ 247,459**	**$ 96,902**	**0.4**
Commercial and Industrial EE&C Programs Subtotal	***Electrification***	**$ -**	**$ -**	**-**	**$ -**	**$ -**	**-**	**$ -**	**$ -**	**-**	**$ -**	**$ -**	**-**	**$ -**	**$ -**	**-**
Energy Efficiency and Conservation Subtotal		**$ 306,540**	**$ 385,563**	**1.3**	**$ 290,462**	**$ 194,049**	**0.7**	**$ 227,223**	**$ 124,429**	**0.5**	**$ 212,725**	**$ 422,306**	**2.0**	**$ 340,728**	**$ 125,111**	**0.4**
Demand Response Programs																
Residential																
Load Control	*EE*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
Non-Residential																
Demand Response Programs Subtotal		**$0**	**$0**	**-**	**$0**	**$0**	**-**	**$0**	**$0**	**-**	**$0**	**$0**	**-**	**$0**	**$0**	**-**
EmPOWER Maryland Portfolio Total																
All Program Total		**$308,196**	**$385,563**	**1.3**	**$292,032**	**$194,049**	**0.7**	**$228,793**	**$124,429**	**0.5**	**$212,725**	**$422,306**	**2.0**	**$342,298**	**$125,111**	**0.4**
Program Investigation Development and Design (PIDD)																
Residential PIDD Programs																
PIDD - Res	*EE*	*$ 1,656*	*$ -*	*-*	*$ 1,570*	*$ -*	*-*	*$ 1,570*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ 1,570*	*$ -*	*-*
C&I PIDD Programs																
PIDD - CI	*EE*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
PIDD Programs Subtotal		**$ 1,656**	**$ -**	**-**	**$ 1,570**	**$ -**	**-**	**$ 1,570**	**$ -**	**-**	**$ -**	**$ -**	**-**	**$ 1,570**	**$ -**	**-**

Middle - Table ES-4 Revised

EmPOWER Maryland Energy Efficiency, Conservation, and Demand Response Plan and Programmatic Cost Effectiveness for 2024-2026 - NPV for Costs and Benefits

	Program Category (EE vs Electrification)	MD Jurisdictional Cost Test (MJCT)			All Ratepayers Test (TRC)			Utility/Administrator Test			Participants Test			Ratepayer Impact Test (RIM)		
		NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio	NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio	NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio	NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio	NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio
Energy Efficiency and Conservation Programs																
Residential EE&C Programs		**$ 136,126**	**$ 108,681**	**0.8**	**$ 128,971**	**$ 61,640**	**0.5**	**$ 75,143**	**$ 28,817**	**0.4**	**$ 107,068**	**$ 115,305**	**1.1**	**$ 104,077**	**$ 33,134**	**0.3**
Energy Efficient Products																
Appliance Recycling	*EE*	*$ 1,849*	*$ 4,539*	*2.5*	*$ 1,753*	*$ 1,580*	*0.9*	*$ 2,710*	*$ 983*	*0.4*	*$ -*	*$ 3,646*	*-*	*$ 4,084*	*$ 983*	*0.2*
Appliance Rebates	*EE*	*$ 34,947*	*$ 25,491*	*0.7*	*$ 33,127*	*$ 11,194*	*0.3*	*$ 13,808*	*$ 6,235*	*0.5*	*$ 28,660*	*$ 9,341*	*0.3*	*$ 20,051*	*$ 6,934*	*0.3*
	Electrification	*$ 1,746*	*$ 443*	*0.3*	*$ 1,656*	*$ 336*	*0.2*	*$ 1,732*	*$ 84*	*0.0*	*$ 400*	*$ 476*	*1.2*	*$ 1,845*	*$ 308*	*0.2*
Home Retrofit and Optimization																
Home Energy Retrofit	*EE*	*$ 23,728*	*$ 28,196*	*1.2*	*$ 22,490*	*$ 18,429*	*0.8*	*$ 23,938*	*$ 6,014*	*0.3*	*$ 15,735*	*$ 41,152*	*2.6*	*$ 31,166*	*$ 6,936*	*0.2*
	Electrification	*$ 4,687*	*$ 3,294*	*0.7*	*$ 4,421*	*$ 2,526*	*0.6*	*$ 3,507*	*$ 1,214*	*0.3*	*$ 4,072*	*$ 5,554*	*1.4*	*$ 4,259*	*$ 2,047*	*0.5*
HVAC	*EE*	*$ 49,368*	*$ 11,681*	*0.2*	*$ 46,774*	*$ 7,158*	*0.2*	*$ 16,510*	*$ 2,581*	*0.2*	*$ 44,856*	*$ 21,485*	*0.5*	*$ 18,152*	*$ 2,610*	*0.1*
	Electrification	*$ 4,455*	*$ 3,765*	*0.8*	*$ 4,204*	*$ 2,891*	*0.7*	*$ 3,214*	*$ 1,478*	*0.5*	*$ 3,671*	*$ 5,295*	*1.4*	*$ 4,068*	*$ 2,324*	*0.6*
ENERGY STAR for New Homes	*EE*	*$ 9,887*	*$ 19,268*	*1.9*	*$ 9,367*	*$ 10,771*	*1.1*	*$ 5,925*	*$ 6,179*	*1.0*	*$ 8,294*	*$ 18,616*	*2.2*	*$ 11,673*	*$ 6,944*	*0.6*
Behavior Based Program	*EE*	*$ 5,370*	*$ 12,002*	*2.2*	*$ 5,094*	*$ 6,755*	*1.3*	*$ 3,715*	*$ 4,048*	*1.1*	*$ 1,379*	*$ 9,740*	*7.1*	*$ 8,694*	*$ 4,048*	*0.5*
Financing - Res		*$ 89*	*$ -*	*-*	*$ 85*	*$ -*	*-*	*$ 85*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ 85*	*$ -*	*-*
Residential Programs Subtotal	***EE***	**$ 125,148**	**$ 101,179**	**0.8**	**$ 118,605**	**$ 55,887**	**0.5**	**$ 66,606**	**$ 26,041**	**0.4**	**$ 98,925**	**$ 103,979**	**1.1**	**$ 93,820**	**$ 28,455**	**0.3**
Residential Programs Subtotal	***Electrification***	**$ 10,888**	**$ 7,503**	**0.7**	**$ 10,281**	**$ 5,753**	**0.6**	**$ 8,453**	**$ 2,776**	**0.3**	**$ 8,143**	**$ 11,325**	**1.4**	**$ 10,172**	**$ 4,679**	**0.5**
Commercial and Industrial EE&C Programs		**$197,980**	**$316,929**	**1.6**	**$187,572**	**$152,402**	**0.8**	**$174,542**	**$106,332**	**0.6**	**$124,626**	**$344,921**	**2.8**	**$266,642**	**$107,678**	**0.4**
Small Business Solutions - Direct Install	*EE*	*$ 22,721*	*$ 54,745*	*2.4*	*$ 21,533*	*$ 27,466*	*1.3*	*$ 27,055*	*$ 21,551*	*0.8*	*$ 13,341*	*$ 59,091*	*4.4*	*$ 43,842*	*$ 21,551*	*0.5*
	Electrification	*$ 2,147*	*$ 1,861*	*0.9*	*$ 2,029*	*$ 1,414*	*0.7*	*$ 1,936*	*$ 421*	*0.2*	*$ 1,274*	*$ 2,588*	*2.0*	*$ 2,166*	*$ 1,205*	*0.6*
Energy Solutions for Business																
Prescriptive	*EE*	*$ 46,887*	*$ 96,682*	*2.1*	*$ 44,437*	*$ 52,666*	*1.2*	*$ 39,433*	*$ 32,213*	*0.8*	*$ 33,857*	*$ 100,983*	*3.0*	*$ 65,651*	*$ 30,410*	*0.5*
	Electrification	*$ 2,383*	*$ 2,301*	*1.0*	*$ 2,254*	*$ 1,744*	*0.8*	*$ 2,169*	*$ 537*	*0.2*	*$ 1,250*	*$ 2,899*	*2.3*	*$ 2,461*	*$ 1,541*	*0.6*
Custom	*EE*	*$ 78,818*	*$ 104,194*	*1.3*	*$ 74,669*	*$ 40,950*	*0.5*	*$ 61,200*	*$ 31,373*	*0.5*	*$ 50,681*	*$ 113,721*	*2.2*	*$ 93,128*	*$ 31,373*	*0.3*
	Electrification	*$ 803*	*$ 3,384*	*4.2*	*$ 761*	*$ 2,624*	*3.4*	*$ 796*	*$ 1,550*	*1.9*	*$ 86*	*$ 2,132*	*24.8*	*$ 1,395*	*$ 2,126*	*1.5*
Retrocommissioning/Building Operations	*EE*	*$ 42,142*	*$ 51,902*	*1.2*	*$ 39,925*	*$ 24,125*	*0.6*	*$ 40,080*	*$ 18,267*	*0.5*	*$ 22,863*	*$ 60,921*	*2.7*	*$ 55,897*	*$ 18,267*	*0.3*
	Electrification	*$ 2,058*	*$ 1,861*	*0.9*	*$ 1,944*	*$ 1,414*	*0.7*	*$ 1,852*	*$ 421*	*0.2*	*$ 1,274*	*$ 2,588*	*2.0*	*$ 2,081*	*$ 1,205*	*0.6*
Financing - C&I		*$ 22*	*$ -*	*-*	*$ 21*	*$ -*	*-*	*$ 21*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ 21*	*$ -*	*-*
Commercial and Industrial EE&C Programs Subtotal	***EE***	**$ 190,568**	**$ 307,523**	**1.6**	**$ 180,563**	**$ 145,207**	**0.8**	**$ 167,768**	**$ 103,404**	**0.6**	**$ 120,742**	**$ 334,715**	**2.8**	**$ 258,517**	**$ 101,602**	**0.4**
Commercial and Industrial EE&C Programs Subtotal	***Electrification***	**$ 7,390**	**$ 9,406**	**1.3**	**$ 6,988**	**$ 7,196**	**1.0**	**$ 6,753**	**$ 2,928**	**0.4**	**$ 3,884**	**$ 10,206**	**2.6**	**$ 8,103**	**$ 6,077**	**0.7**
Energy Efficiency and Conservation Subtotal		**$ 334,106**	**$ 425,610**	**1.3**	**$ 316,543**	**$ 214,043**	**0.7**	**$ 249,685**	**$ 135,149**	**0.5**	**$ 231,694**	**$ 460,226**	**2.0**	**$ 370,718**	**$ 140,813**	**0.4**
Demand Response Programs																
Residential																
Load Control	*EE*	*$ 417*	*$ 632*	*1.5*	*$ 390*	*$ 589*	*1.5*	*$ 520*	*$ 250*	*0.5*	*$ -*	*$ 130*	*-*	*$ 520*	*$ 250*	*0.5*
Non-Residential																
Demand Response Programs Subtotal		**$417**	**$632**	**1.5**	**$390**	**$589**	**1.5**	**$520**	**$250**	**0.5**	**$0**	**$130**	**-**	**$520**	**$250**	**0.5**
EmPOWER Maryland Portfolio Total																
All Program Total		**$336,178**	**$426,242**	**1.3**	**$318,504**	**$214,632**	**0.7**	**$251,775**	**$135,399**	**0.5**	**$231,694**	**$460,356**	**2.0**	**$372,808**	**$141,063**	**0.4**
Program Investigation Development and Design (PIDD)																
Residential PIDD Programs																
PIDD - Res	*EE*	*$ 1,656*	*$ -*	*-*	*$ 1,570*	*$ -*	*-*	*$ 1,570*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ 1,570*	*$ -*	*-*
C&I PIDD Programs																
PIDD - CI	*EE*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
PIDD Programs Subtotal		**$ 1,656**	**$ -**	**-**	**$ 1,570**	**$ -**	**-**	**$ 1,570**	**$ -**	**-**	**$ -**	**$ -**	**-**	**$ 1,570**	**$ -**	**-**

Maximum GHG - Table ES-4 Revised

EmPOWER Maryland Energy Efficiency, Conservation, and Demand Response Plan and Programmatic Cost Effectiveness for 2024-2026 - NPV for Costs and Benefits

	Program Category (EE vs Electrification)	MD Jurisdictional Cost Test (MJCT)			All Ratepayers Test (TRC)			Utility/Administrator Test			Participants Test			Ratepayer Impact Test (RIM)		
		NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio	NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio	NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio	NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio	NPV Costs ($1,000s)	NPV Benefits ($1,000s)	Ratio
Energy Efficiency and Conservation Programs																
Residential EE&C Programs		**$ 188,700**	**$ 134,380**	**0.7**	**$ 178,629**	**$ 83,150**	**0.5**	**$ 115,550**	**$ 39,667**	**0.3**	**$ 152,614**	**$ 169,995**	**1.1**	**$ 151,564**	**$ 49,305**	**0.3**
Energy Efficient Products																
Appliance Recycling	*EE*	*$ 2,034*	*$ 4,474*	*2.2*	*$ 1,928*	*$ 1,663*	*0.9*	*$ 2,943*	*$ 1,031*	*0.4*	*$ -*	*$ 3,836*	*-*	*$ 4,386*	*$ 1,031*	*0.2*
Appliance Rebates	*EE*	*$ 40,484*	*$ 27,615*	*0.7*	*$ 38,365*	*$ 13,531*	*0.4*	*$ 17,117*	*$ 7,602*	*0.4*	*$ 32,781*	*$ 11,534*	*0.4*	*$ 24,641*	*$ 8,463*	*0.3*
	Electrification	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
Home Retrofit and Optimization																
Home Energy Retrofit	*EE*	*$ 24,775*	*$ 27,964*	*1.1*	*$ 23,482*	*$ 18,484*	*0.8*	*$ 24,925*	*$ 6,025*	*0.2*	*$ 15,787*	*$ 41,272*	*2.6*	*$ 32,171*	*$ 6,948*	*0.2*
	Electrification	*$ 44,124*	*$ 29,890*	*0.7*	*$ 41,620*	*$ 22,943*	*0.6*	*$ 40,550*	*$ 11,459*	*0.3*	*$ 38,315*	*$ 58,392*	*1.5*	*$ 47,354*	*$ 18,501*	*0.4*
HVAC	*EE*	*$ 59,368*	*$ 13,127*	*0.2*	*$ 56,252*	*$ 8,459*	*0.2*	*$ 19,358*	*$ 2,951*	*0.2*	*$ 53,934*	*$ 25,195*	*0.5*	*$ 21,234*	*$ 2,983*	*0.1*
	Electrification	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
ENERGY STAR for New Homes	*EE*	*$ 12,350*	*$ 19,626*	*1.6*	*$ 11,702*	*$ 11,315*	*1.0*	*$ 6,757*	*$ 6,551*	*1.0*	*$ 10,417*	*$ 20,026*	*1.9*	*$ 12,900*	*$ 7,332*	*0.6*
Behavior Based Program	*EE*	*$ 5,476*	*$ 11,684*	*2.1*	*$ 5,195*	*$ 6,755*	*1.3*	*$ 3,816*	*$ 4,048*	*1.1*	*$ 1,379*	*$ 9,740*	*7.1*	*$ 8,795*	*$ 4,048*	*0.5*
Financing - Res		*$ 89*	*$ -*	*-*	*$ 85*	*$ -*	*-*	*$ 85*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ 85*	*$ -*	*-*
Residential Programs Subtotal	***EE***	**$ 144,487**	**$ 104,490**	**0.7**	**$ 136,924**	**$ 60,207**	**0.4**	**$ 74,916**	**$ 28,208**	**0.4**	**$ 114,300**	**$ 111,603**	**1.0**	**$ 104,126**	**$ 30,805**	**0.3**
Residential Programs Subtotal	***Electrification***	**$ 44,124**	**$ 29,890**	**0.7**	**$ 41,620**	**$ 22,943**	**0.6**	**$ 40,550**	**$ 11,459**	**0.3**	**$ 38,315**	**$ 58,392**	**1.5**	**$ 47,354**	**$ 18,501**	**0.4**
Commercial and Industrial EE&C Programs		**$226,526**	**$324,404**	**1.4**	**$214,601**	**$164,727**	**0.8**	**$200,453**	**$114,301**	**0.6**	**$141,181**	**$377,910**	**2.7**	**$299,106**	**$116,484**	**0.4**
Small Business Solutions - Direct Install	*EE*	*$ 25,655*	*$ 56,232*	*2.2*	*$ 24,315*	*$ 29,540*	*1.2*	*$ 30,254*	*$ 23,178*	*0.8*	*$ 14,349*	*$ 63,553*	*4.4*	*$ 48,309*	*$ 23,178*	*0.5*
	Electrification	*$ 5,098*	*$ 4,080*	*0.8*	*$ 4,813*	*$ 3,109*	*0.6*	*$ 4,672*	*$ 1,182*	*0.3*	*$ 3,893*	*$ 6,622*	*1.7*	*$ 5,224*	*$ 2,592*	*0.5*
Energy Solutions for Business																
Prescriptive	*EE*	*$ 51,422*	*$ 99,260*	*1.9*	*$ 48,735*	*$ 56,477*	*1.2*	*$ 43,344*	*$ 34,564*	*0.8*	*$ 36,333*	*$ 108,298*	*3.0*	*$ 71,474*	*$ 32,630*	*0.5*
	Electrification	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
Custom	*EE*	*$ 86,823*	*$ 103,790*	*1.2*	*$ 82,264*	*$ 43,340*	*0.5*	*$ 68,027*	*$ 33,206*	*0.5*	*$ 53,650*	*$ 120,411*	*2.2*	*$ 101,828*	*$ 33,206*	*0.3*
	Electrification	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
Retrocommissioning/Building Operations	*EE*	*$ 47,514*	*$ 52,674*	*1.1*	*$ 45,024*	*$ 25,877*	*0.6*	*$ 45,196*	*$ 19,592*	*0.4*	*$ 24,516*	*$ 65,337*	*2.7*	*$ 62,159*	*$ 19,592*	*0.3*
	Electrification	*$ 9,993*	*$ 8,367*	*0.8*	*$ 9,430*	*$ 6,383*	*0.7*	*$ 8,938*	*$ 2,580*	*0.3*	*$ 8,441*	*$ 13,688*	*1.6*	*$ 10,091*	*$ 5,287*	*0.5*
Financing - C&I		*$ 22*	*$ -*	*-*	*$ 21*	*$ -*	*-*	*$ 21*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ 21*	*$ -*	*-*
Commercial and Industrial EE&C Programs Subtotal	***EE***	**$ 211,413**	**$ 311,956**	**1.5**	**$ 200,337**	**$ 155,235**	**0.8**	**$ 186,821**	**$ 110,540**	**0.6**	**$ 128,848**	**$ 357,600**	**2.8**	**$ 283,770**	**$ 108,605**	**0.4**
Commercial and Industrial EE&C Programs Subtotal	***Electrification***	**$ 15,091**	**$ 12,447**	**0.8**	**$ 14,243**	**$ 9,492**	**0.7**	**$ 13,611**	**$ 3,762**	**0.3**	**$ 12,334**	**$ 20,310**	**1.6**	**$ 15,315**	**$ 7,879**	**0.5**
Energy Efficiency and Conservation Subtotal		**$ 415,226**	**$ 458,784**	**1.1**	**$ 393,230**	**$ 247,877**	**0.6**	**$ 316,003**	**$ 153,968**	**0.5**	**$ 293,796**	**$ 547,905**	**1.9**	**$ 450,670**	**$ 165,790**	**0.4**
Demand Response Programs																
Residential																
Load Control	*EE*	*$ 821*	*$ 1,631*	*2.0*	*$ 768*	*$ 1,521*	*2.0*	*$ 1,103*	*$ 646*	*0.6*	*$ -*	*$ 335*	*-*	*$ 1,103*	*$ 646*	*0.6*
Non-Residential																
Demand Response Programs Subtotal		**$821**	**$1,631**	**2.0**	**$768**	**$1,521**	**2.0**	**$1,103**	**$646**	**0.6**	**$0**	**$335**	**-**	**$1,103**	**$646**	**0.6**
EmPOWER Maryland Portfolio Total																
All Program Total		**$417,703**	**$460,415**	**1.1**	**$395,569**	**$249,398**	**0.6**	**$318,676**	**$154,614**	**0.5**	**$293,796**	**$548,239**	**1.9**	**$453,343**	**$166,435**	**0.4**
Program Investigation Development and Design (PIDD)																
Residential PIDD Programs																
PIDD - Res	*EE*	*$ 1,656*	*$ -*	*-*	*$ 1,570*	*$ -*	*-*	*$ 1,570*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ 1,570*	*$ -*	*-*
C&I PIDD Programs																
PIDD - CI	*EE*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*	*$ -*	*$ -*	*-*
PIDD Programs Subtotal		**$ 1,656**	**$ -**	**-**	**$ 1,570**	**$ -**	**-**	**$ 1,570**	**$ -**	**-**	**$ -**	**$ -**	**-**	**$ 1,570**	**$ -**	**-**

APPENDIX H
JOINT UTILITY PROPOSAL

Future Programming Work Group
Energy Efficiency and Demand Response Programs, Distributed Energy Resources, and Fuel Switching Proposal

The Joint Utilities (the "Utilities") are seeking to evolve EmPOWER Maryland program offerings to meet Greenhouse Gas ("GHG") abatement goals in alignment with county, state, and national climate policies, including Maryland's Climate Action Plan. Accordingly, the Utilities present examples of the types of initiatives to consider that align with the consensus position presented by the Maryland Energy Administration ("MEA"), the Office of People's Counsel ("OPC"), Maryland Energy Efficiency Advocates ("MEEA"), the Utilities, and the Technical Staff ("Staff")of the Maryland Public Service Commission ("Commission").

The Utilities are looking towards the future of EmPOWER Maryland to advance innovative solutions for meeting GHG abatement goals. The Utilities strive to establish a framework that embraces both new and emerging technologies and continues the significant benefits from traditional energy efficiency and demand response programs. These program offerings are examples of the types of initiatives that the Utilities may consider offering to provide both energy savings and GHG abatement. They are in different stages of technological maturity, and some may require enabling investments by the utility to implement. The Utilities recognize that program offerings must be individually considered and evaluated for each utility's unique service territory to assess their ability to provide diverse and meaningful programs to their customers and other factors that may influence program offerings across Maryland. The framework will maintain all EmPOWER Maryland plans and programs will continue to be presented and reviewed prior to every planning cycle to ensure that they are appropriate, affordable, aligned with federal and state policies and cost effective. In addition, budget and surcharge impacts must be analyzed.

The initiatives the Utilities are considering are categorized by the resource channels presented in the consensus document: Behind the Meter; Front-of-Meter Community Resources, Front-of-Meter Utility Resources; and, Non-Energy Resources, as well as the GHG abatement boundaries presented.

The utility will achieve XXX GHG abatement, including:

1. *<u>No less than x%</u> of the individual utility's total GHG abatement goal shall be achieved through **behind-the-meter** resources and **front-of-meter community** resources funded through EmPOWER based on a utility-specific study.*

   a. *<u>No less than x%</u> of the individual utility's total GHG abatement goal shall be achieved through EmPOWER funded **behind-the-meter energy efficiency** programs based on a utility-specific study. These programs will count toward (1) above.*

<u>Behind the Meter Resources</u>

- **<u>Energy efficiency programs:</u>** improve the efficiency of the end use or building shell regardless of fuel source
  - "Traditional" electric and gas residential and commercial & industrial energy efficiency programs
  - Expand end-use technologies or building shell initiatives
- **<u>Beneficial electrification:</u>** measures that increase electric usage and/or demand by switching from direct fossil end use to electric use

- Fuel switching from oil, propane, gas to electric such as space heating and water heating
- Electric road transportation and non-road transportation for new programs without an existing funding source such as forklifts, boats, snowmobiles, golf carts
- Other electrification such as port, heavy equipment, residential gardening equipment, etc.

- **Passive demand reduction programs:** reductions in demand (kW) that do not involve active control of measures; may be achieved through energy efficiency, dynamic pricing, or other distributed energy resources
  - Behavioral demand response
    - Gamification challenges and "friend groups"
    - Customer notifications
    - University challenges
    - Tie in with the Automated Residential Technology ("ART") Program
  - Load shifting via various rate offerings
  - Energy efficiency that results in reduced demand

- **Active demand reduction programs:** reductions in demand (kW) that involve active control of measures; may be achieved through distributed energy resources or other load flexibility measures
  - Connected devices such as switch and thermostats, EV chargers, appliances, water heaters, pool pump programs, lighting, etc.
  - Vehicle to grid
  - Virtual power plant
  - Distributed energy resources

Front-of-Meter Community Resources

- Programs or resources that can be shown to directly benefit a set of customers; these are separate from utility resources that broadly benefit customers (e.g., a program that benefits an identifiable set of consumers that opt-in as compared to improvements in transformer efficiency that benefit all customers)
  - Community renewable resources
  - Community lighting
  - Virtual Power Plant
  - Distributed Energy Resources
  - EV Charging

2. *No more than x% of the individual utility's total GHG abatement goal shall be achieved through* ***non-energy resources*** *or* ***front-of-meter utility resources*** *programs, and inclusion of these programs will be subject to Commission approval.*

Front-of-Meter Utility Resources

- Utility funded programs or resources that can be shown to directly benefit utility customers
  - Conservation voltage reduction
  - High-efficiency transformers
  - Methane gas detection

- Line loss reduction programs
- Street and area lighting
- Electric transportation/EV charging
- Distributed energy resources
- Renewables

Non-Energy Resources

- Greenhouse gas abatement programs that are related to a utility's programs or business areas but whose benefits are largely non-energy based (e.g., replacing appliances with different refrigerants)
  - Expanded recycling programs
    - refrigerants, batteries, dehumidifiers, refrigeration and air conditioners, appliances
  - Encourage low-global warming potential refrigerants
  - Encourage battery replacement to reduce switch back to fossil fuel
  - Sell or donate utility equipment such as computers and screens

3. *Contributions to the GHG abatement goal for programs other than those in 1, 1a, and 2, such as additional programs in alignment with PC44, may be included in each utility's program plans. These programs shall be composed of behind-the-meter and front-of-meter community resources that are not EmPOWER-funded. Inclusion of these programs will be subject to Commission approval.*

Various Resources

- Pre-paid billing
- TOU and other innovative rates
- Maintaining or expanding electric road transportation/charging for existing programs with an existing funding source
- Distributed energy resources, such as battery storage with an existing funding source
- Other fuel switching such as diesel to gas generators; propane to gas grill hookups

4. *[Equity Goal] <u>No less than x%</u> of [TBD] shall be focused on the individual utility's LMI customers and communities.*

Various Resources

- LMI-focused Energy Efficiency and Demand Response programs
- LMI-focused donation of utility equipment such as computers and screens
- LMI-focused community renewable resources
- LMI-focused beneficial electrification
- Enhanced marketing and outreach efforts for awareness and education of EmPOWER Maryland programs to LMI customers
- LMI-focused fuel switching from oil, propane, gas to electric such as space heating and water heating
- LMI-focused load shifting via various rate offerings
- LMI-focused energy efficiency that results in reduced demand